

# AIRFIX

magazine

August 1973

FOR PLASTIC MODELLERS

monthly 15p

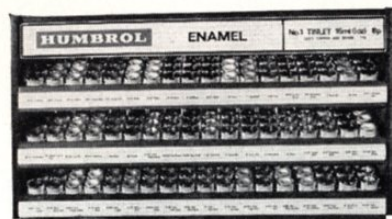
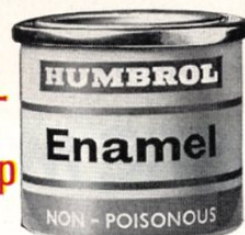


## in this issue

'Dambuster' Lancaster conversion/ Soviet  
SU 152 self-propelled gun/ 8th Army HQ  
forces/ Paris Air Show/ New kits



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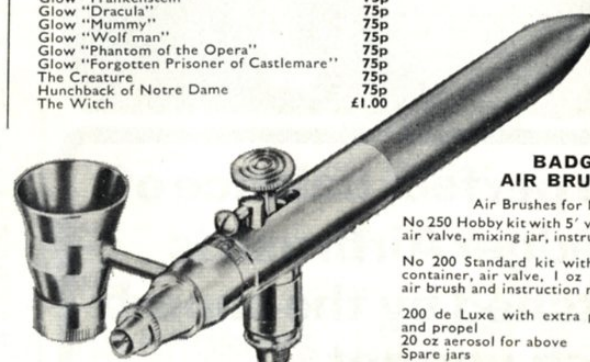
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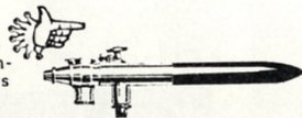


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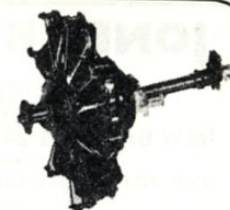
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FNC10 Cuirassier  
FNC11 Carabinier  
FN1 Old Guard Officer  
FN2 Old Guard attacking  
FN3 Old Guard marching  
FN10 Line Grenadier marching  
FN13 Dragoon a Pied marching  
FN21 Old Guard on guard  
FN22 Old Guard Drummer

BRITISH

BN1 Guard Officer  
BN2 Guard attacking  
BN20 Guard on guard  
BN21 Guard Drummer  
BN2 Hussar

BNC3 Light Dragon  
BNC1 Royal Horse Guard  
BNC5 Royal Scots Grey  
BN11 Fusilier marching  
BN15 Highlander marching  
BN3 Guard marching  
BN8 Line Infantryman marching

RUSSIAN

PN3 Guard marching  
PN8 Line Infantryman marching  
PN12 Landwehr marching

RUSSIAN

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AN5 Austro (Hungarian) Grenadier marching  
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NN3 Grenadier marching

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M7 Fifer marching  
M8 Bugler (sounding attack)  
M9 Pioneer swinging axe  
M10 Infantryman kneeling at ready  
M11 Infantryman kneeling firing  
M12 Infantryman marching  
M13 Infantryman loading musket  
M14 Infantryman standing firing  
M15 Infantryman taking cartridge out of pouch  
M16 Infantryman charging  
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No. 2

# What do you know about the police?



1. Can a bloodstain be identified as coming from a particular person?



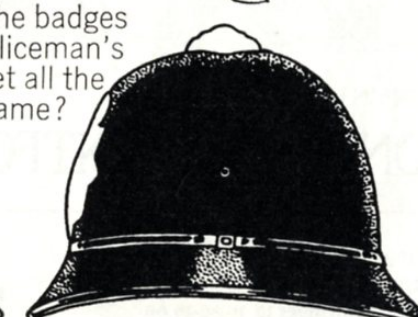
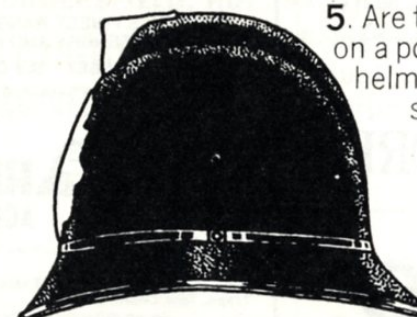
2. What is the minimum number of persons required on an identification parade?

3. How many horses are there in the police service?

4. How many police forces are there in Great Britain?



5. Are the badges on a policeman's helmet all the same?



This is the second in a series depicting the background, present-day working and development of Britain's police force. If you missed the first and would like a copy, or would like further information about the police, please write to:  
Quiz, Dept. RJ18, Home Office, London SW1A 2AP

1. No. Unlike finger-prints, blood has no unique characteristics. Human blood can be divided into groups, and evidence can sometimes prove that blood could not have come from a certain person. 2. Eight. 3. Just over 400. 4. 67 in all. 47 in England and Wales, 20 in Scotland. 5. No. Each force has its own badge or badges.

ANSWERS



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G3 German Panzer Grenadier, advancing  
G4 German Infantryman, kneeling  
G5 German Artilleryman, hands to ears  
G6 German Artilleryman, kneeling  
G7 German Artilleryman, with rangefinder  
G8 German Officer, slung binoculars  
G9 German Paratrooper, advancing  
G10 German Infantryman, carrying 'ammo' boxes  
G11 German Artilleryman with binoculars  
G12 German Infantryman firing Panzer Faust  
G13 German Infantryman, Panzer Faust loader  
B1 British Infantryman, battle dress, advancing  
B2 British Infantry N.C.O., battle dress, advancing  
B3 British Infantryman, battle dress, kneeling  
B4 British Infantryman, battle dress, lying firing  
B5 British Infantry Officer with revolver  
B6 British Infantry N.C.O., with binoculars  
B7 British Infantryman, lying firing Bren gun  
B8 British Paratrooper, advancing  
B9 British Artilleryman, skeleton equipment, kneeling holding shell  
B10 British Artilleryman, battle dress, kneeling with binoculars  
B11 British Artilleryman, skeleton equipment, manning gun  
B12 British Artillery Officer, skeleton equipment, with map board  
A1 American Inf. advancing, with marching pack  
A2 American Inf. advancing, combat order  
A3 American Inf. N.C.O., combat order, advancing  
A4 American Inf., combat order, kneeling firing  
A5 American Inf. Officer, combat order, with binoculars

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20/12 French Napoleonic 6" Howitzer  
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AIRFIX magazine

# AIRFIX magazine

August 1973  
Volume 14 Number 12

## FOR PLASTIC MODELLERS

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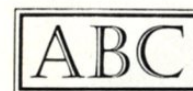
Editorial Director Darryl Reach  
Editor Bruce Quarrie  
Art Editor Ian Heath

### Cover Picture

Despite the present 'thaw' in the Cold War, Soviet reconnaissance aircraft remain very active over the North Sea and Atlantic, as this striking shot of a Russian 'Bear' being intercepted by a Phantom of No 43 Squadron from RAF Leuchars clearly demonstrates. Note the numerous bulges concealing electronic detection equipment on the Russian aircraft, also the large in-flight refuelling probe on the nose. 43 Squadron's 'fighting cock' emblem is plainly visible on the Phantom's fin, as are the long-range tanks and air-to-air missiles beneath wings and fuselage (Ministry of Defence photo).

Next month we hope to bring you our long-promised feature on RNZAF Harvards, a PzKpfw III recovery tank in 1:76 scale, modelling Second World War Resistance fighters in two scales and some more Mosquito modelling notes from Bryan Philpott. John Sandars will be taking a look at 8th Army infantry uniforms while George Gush examines 16th Century artillery, alongside all our regular features. Roy Dilley has been on holiday which explains his absence from this issue, but he will be back on form in the next one.

Next publication date  
August 24 1973



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August 1973

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Terry Gander and Neil Crosby

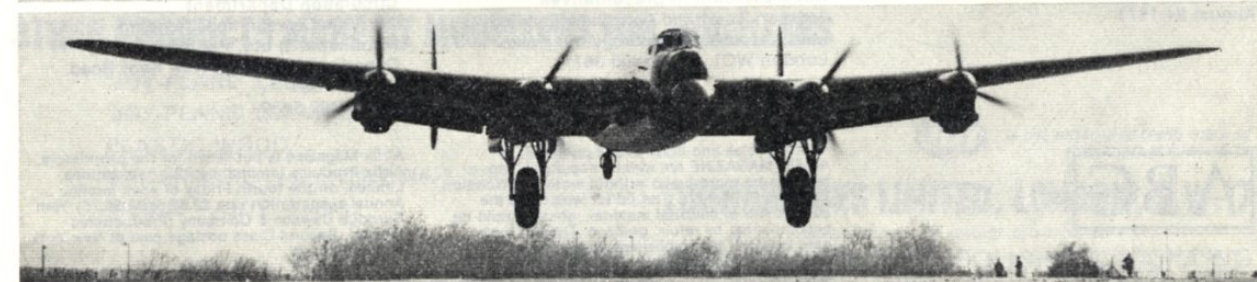
# in the air



## Biggin Hill Air Fair

AS USUAL THE 1973 Air Fair at Biggin Hill marked the start of the aviation enthusiast's year, and this year was held from May 17-19. The show followed its usual mixed and pleasant pattern with the highlight being a spectacular helicopter assault by the Royal Navy. Other

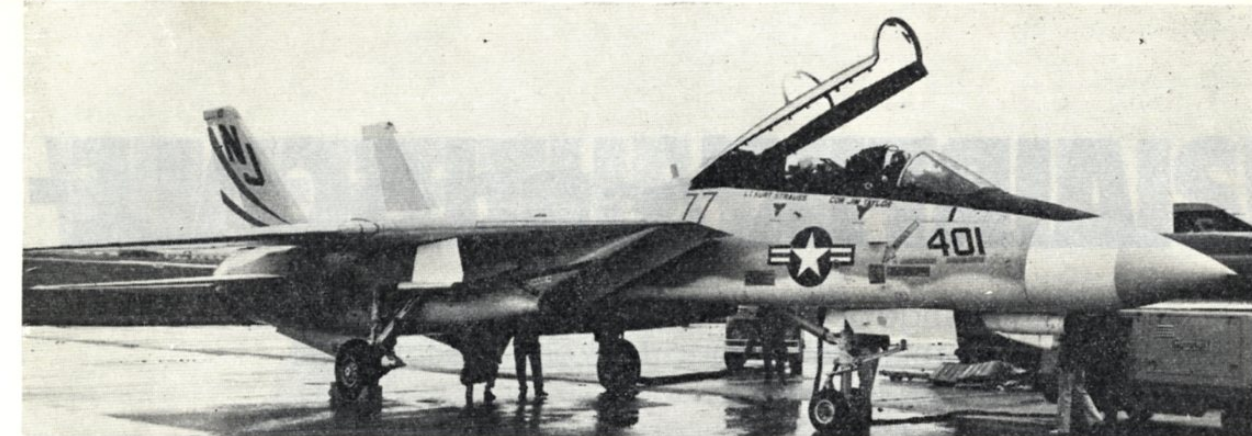
new items were a Formula One Air Race and the showing of a DC-10 and TriStar. There were the usual excellent displays by the Patrouille de France and the Red Arrows flying over from Southend. The photographs show only a small selection of the aircraft on show but already we're looking forward to next year.



Above Scout XV137 in new matt black and olive drab finish. Below Honda and dartsel winched up while on the move by a Wessex 5.



Above Wessex 5 XT480 of 845 Sqn. Above left the Stringbag flies again. Note White Ensign flown from rear cockpit! Left Court Line TriStar. Below left Laker DC-10. Below Stampe SIVC G-AZSA disguised as impressed MX457. Foot of page Lancaster KM-B PA474 comes in to land.



Above and right two views of the F-14 Tomcat, one of the few really new attractions at the show. This aircraft will be featured in an article next month. Below right support aircraft for the USN display was this C-130. The sign over the crew door reads 'Fat Albert Airlines'. Bottom right the SIAI-Marchetti SM 1019 is a much reworked and re-engined Cessna 0-1 and is another candidate for conversion from the Airfix kit. Bottom looming over the show was the ill-fated Tu-144 (Charger) with its canard fore-planes extended.

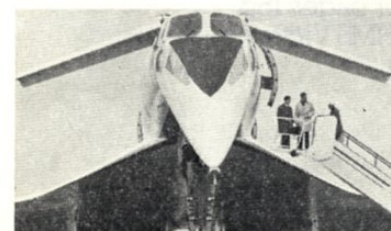


## Paris Air Show

ONE THING WE shall always remember about this year's Paris Air Show is the absolutely foul weather that prevailed during most of the week, preventing everyone from giving proper flying displays and recording the events and exhibits on film (most of the photos shown were taken in pouring rain). Another thing to remember was the effort put in by the French Police to further prevent anyone doing anything, including preventing photographers from taking shots of such secret items as a First World War Hanriot HD-1 which was specially flown over from the States in a Boeing 747F.

But enough of that and more on the aircraft. For a start, many of the promised exhibits did not appear, mainly because of the high costs involved. For instance, the C-5A Galaxy was scheduled to appear but as Lockheeds themselves would have to hire one from the USAF, the fee would have been \$750,000 for a week — so it didn't appear! Other sorely missed items were the A-9 and 10, but there was still much to be seen. One source listed over 90 new types and sub-variants on show and in our limited space we can mention only a few. Star

Continued on page 646



August 1973

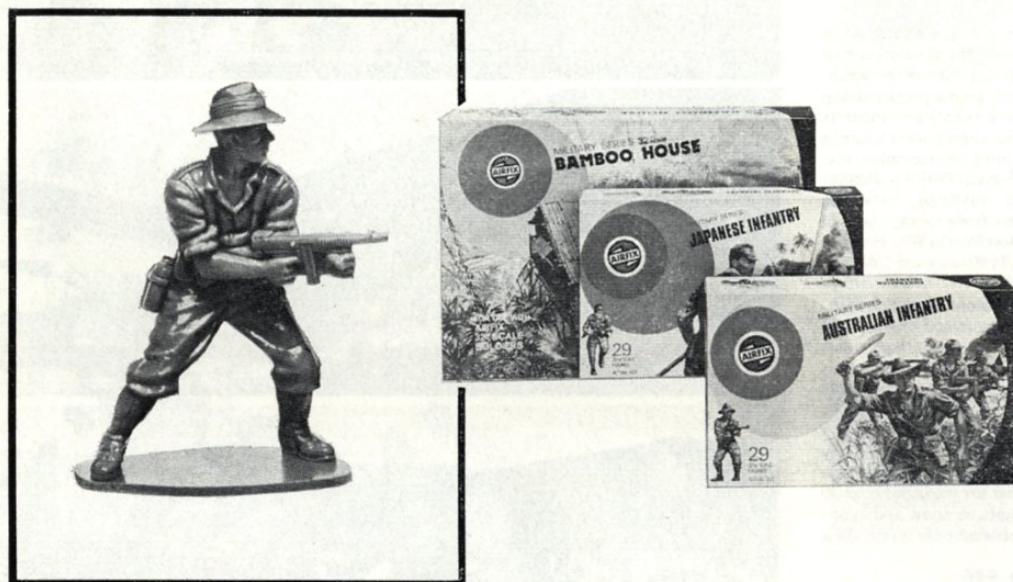


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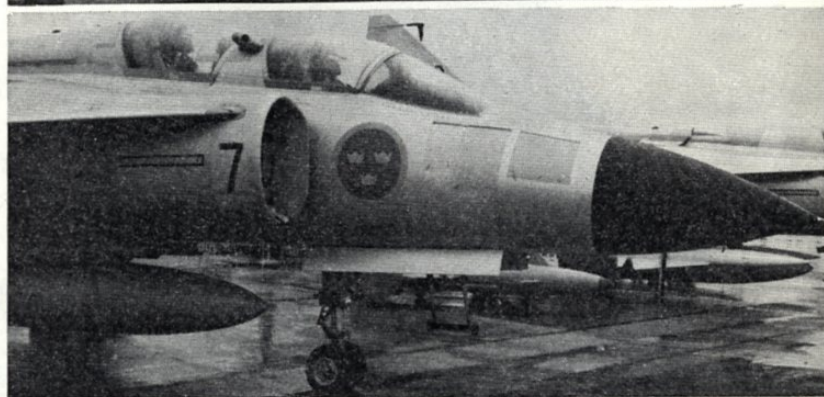
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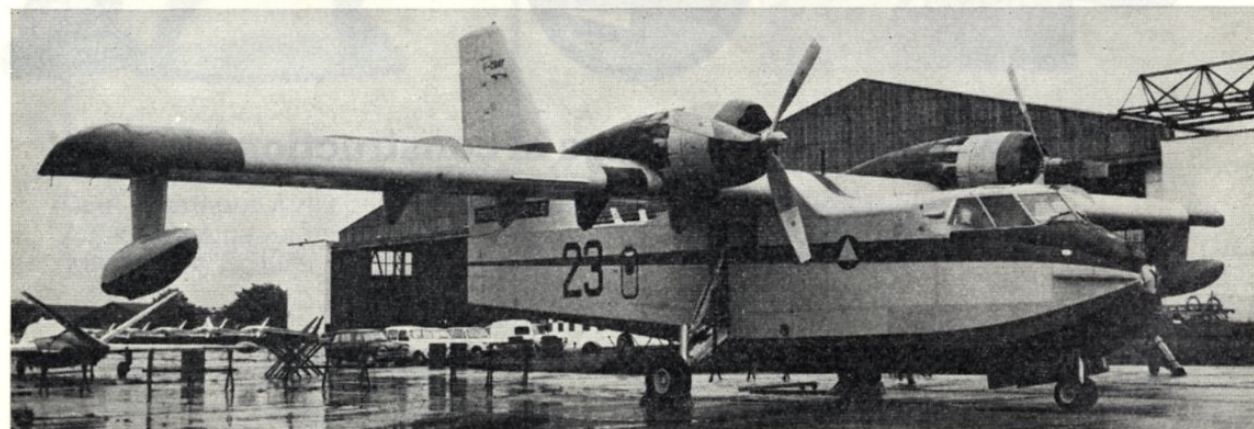
Continued from page 643

of the show was the Tomcat, with the brilliant Bob Hoover taking the top pilot laurels for his brilliant flying of the Northrop F-5E Tiger and Shrike Commander, even under appalling weather conditions. We never got quite used to seeing the near vertical climb outs after VTO by the two-seat Harrier G-VTOL, while the Concorde came and went slotting easily into the normal airfield routine (during the week Le Bourget continues to function as a normal civil airport). As always at Paris the static display was arranged so that photography was made as difficult as possible, but we managed to find the prototype Fournier RF-8, the Lippisch X-113 and Jetstream and Pup in their new RAF markings. In a hangar were five Musée de l'Air veterans on display to commemorate the Santos Dumont centenary, including a Caudron G3, Deppurdussin, Demoiselle, Bleriot 11, and a Sopwith 1½-Strutter, but this time it was the gloom that prevented photography.

Overshadowing the entire show was the unfortunate crash of the Russian Tupolev Tu 144. What effects this incident will have on the future of supersonic air travel remains to be seen, but one effect will probably be on the nature of future Paris Salons. For some years now there has been talk of the show moving out to another location, but this crash will probably hasten such a move. It seems very likely that future Salons will continue to be held at Le Bourget but only the static show will be held there, and the flying display will be held at another field — probably Evreux, on the other side of Paris. This is a large military field with good facilities and access but hardly convenient for people who want to see the entire show. Who knows, perhaps in the long term, even our Farnborough show will have to be moved. □



**Top** two views of the Saab SK37 Viggen, seen at Paris for the first time. Note revised tail configuration and the periscope in front of the rear cockpit. **Above** the CASA C 212 Aviocar is the intended Spanish-built replacement for their veteran Ju 52/3M transports. This machine is camouflaged in sand with olive drab and khaki. **Left** some different markings for an Islander model as seen on the tail of this Rumanian-built aircraft, with Rumanian tricolour. 413 is the Paris Air Show number. **Below** Canadair C1-215 of the French Protection Civile used in fire-fighting.



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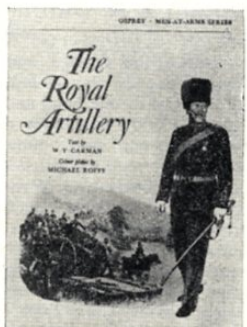
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Empress Dragoon Officer, Trooper  
Carabinier in Bearskin, Officer, Trooper  
Light Infantry Carabinier Officer, Trooper  
Imperial Guard Grenadier Officer  
Line Infantry Grenadier:  
Officer (Campaign Dress)  
Fusilier  
Field Officer in High Boots  
Officer, Cocked Hat  
Grenadier a Cheval Officer

**Napoleonic Period, Allied**  
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Duke of York  
Earl of Uxbridge  
Highland Dress  
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Officer in Kilt  
Private  
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Foot Guards, Sergeant, Private  
Rifle Brigade Officer  
Line Infantry (Peninsular) Officer, Private, Sergeant  
Line Infantry Sergeant, Private  
Line Dragoon Officer (1806)  
Hussar Officer in Campaign Dress  
Royal Horse Artillery Officer  
Household Cavalry Officer, Trooper  
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# charge of the light brigade

Captain J. A. Oldham modelled by Sid Horton

CAPTAIN OLDHAM LED the 13th Light Dragoons in the 'Charge' and was presumed killed. He was last seen wounded and bleeding, with a sword in one hand and a pistol in the other. His body was never recovered. This information, and more, comes from a new book, *Honour the Light Brigade* by William M. Lunnis and Kenneth G. Wynn, published by Hayward and available from Maggs Bros, 50 Berkeley Square, at £4.50, plus 28p postage and insurance; a most informative book for anyone interested in the officers and men who took part in the 'Charge'. It is a massive piece of research, listing some 2,000 officers, NCOs and ORs of the five light cavalry regiments which served in the Crimea 1854-56. Details of their honours, medals and service records, etc, are given and those who took part in the 'Charge' are clearly shown.

Uniform information comes from the indispensable *Uniforms and Equipment of the Light Brigade* by John and Boris Mollo.

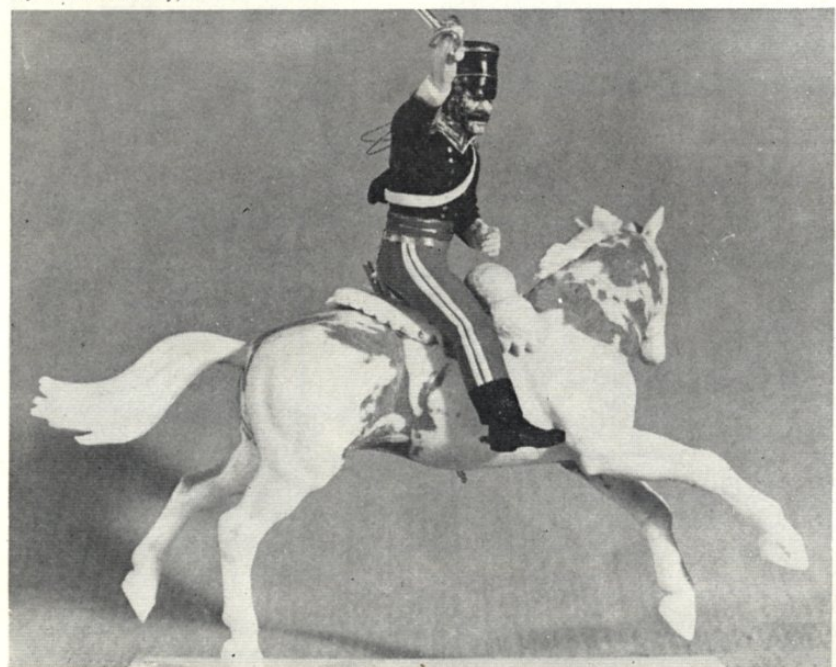
Needed for this conversion — Airfix Hussar, blanket from the 'Grey' and straight sabre No 94 and epaulettes from Historex spares.

First, for a change, I'll start with the horse. The one needed comes from the Hussar kit. Using a razor saw, carefully, with a 45 degree

angle cut, saw away the legs, the cuts being shown in drawings 1 and 3. These are cemented into their new positions, shown in drawings 2 and 4, and braced from the inside with scrap plastic, filled with body putty. The two body halves can now be cemented together and the whole thing left to dry out thoroughly, preferably overnight. Then, with a razor saw, saw right through the neck four times, using drawings 1, 3, and 5 as a guide. These are then cut out into wedge shapes, using the same drawings. Scrap plastic is then inserted between each one and cemented in place using drawings 4 and 6. The head can now be cemented in place and extensive filling done with Green Stuff. Again allow to dry out overnight, then sand to shape. So the horse will stand securely on one leg, drill up through the hoof and leg and through the base. A pin is then pushed up through them and cemented in place using a five minute epoxy adhesive. The horse is held in place with clothes pegs until this sets.

While this is happening, take the sheepskin from the Hussar kit and, using drawing 8 as a guide, carefully cut away the existing shabraque, shown as the shaded area. Cement the two halves together and allow to dry. Then, carefully, using a razor saw, and again using

The completed figure on its half-finished horse, showing areas of Green Stuff filling (all photos by Dennis Mackey).



Close-up of the figure's head with chin scales from 5 thou card and hair of Green Stuff.

drawing 8, cut right through the sheepskin following the dotted line and add scrap sprue as a filler shown as the black area in drawing 9. This can now be cemented in place on to the horse. The blanket is from the 'Grey' kit, cut to shape and butt jointed up to the sheepskin. The gap between the blanket and the dogtooth edging is filled with Green Stuff, and sanded smooth. Girth, stirrup leathers and bridle are made from the 5 thou plastic card supplied with the kit, using drawing 14 of the finished horse as a guide. The reins are made from gift tape.

Now we come to the figure.

## Head

The shako was covered with a foul weather cover of oiled silk. Over this went, in the case of officers, the dress cap lines of gold.

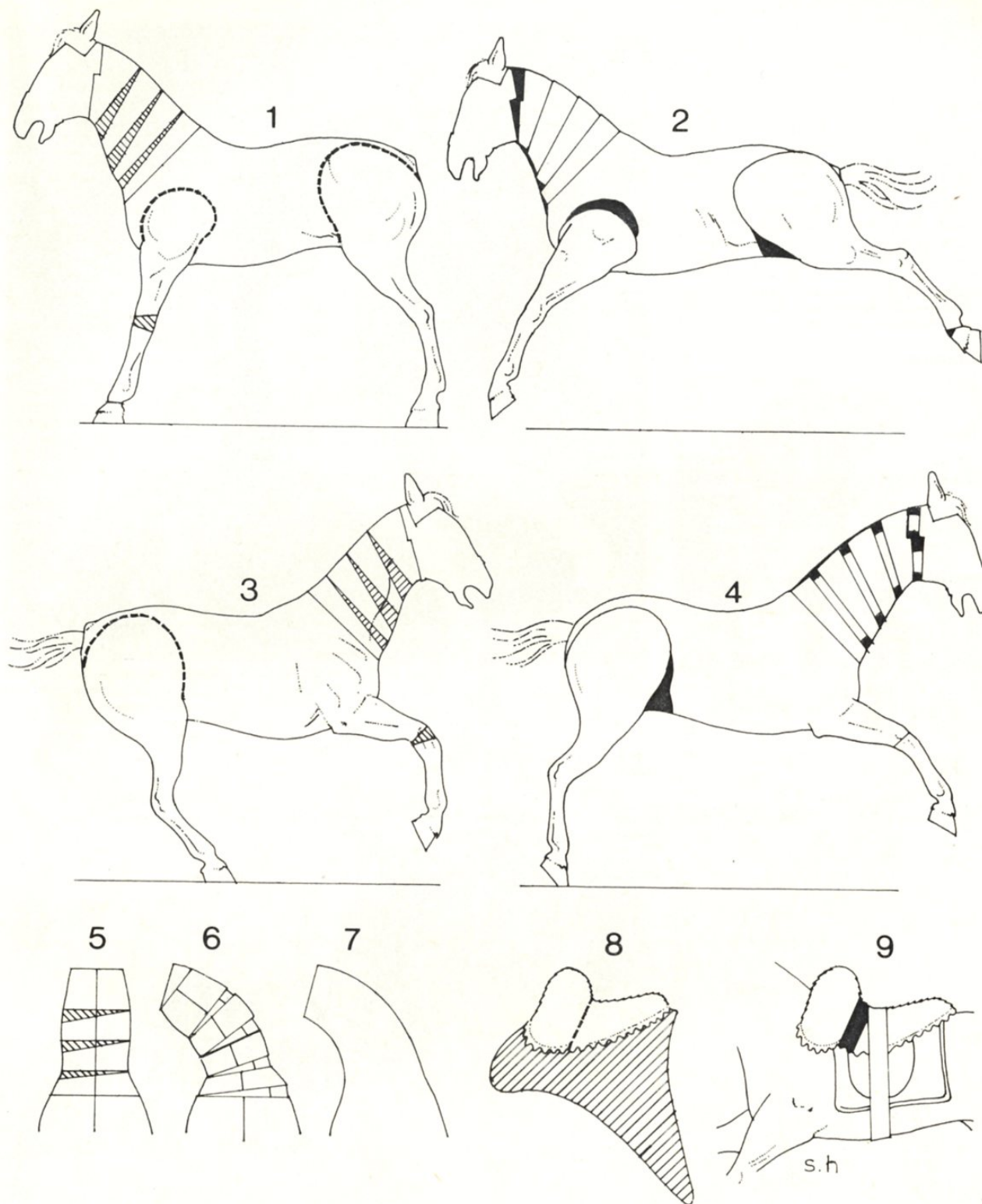
Take the head from the Hussar kit and sand the busby to a smooth rounded shape. Then add a circle of scrap plastic to the top to add height. The dimensions of the thickness of plastic needed is shown above the busby in drawing 10. Also in drawing 10 you will notice a shaded area at the base of the busby. This has to be carved carefully away so that you have something like what is shown in drawing 11, and remove some of the sprue beneath the collar to allow the head to be re-positioned. Now a peak can be added from 5 thou plastic card.

The collar is cleaned up, sideburns and hair can be built up from Green Stuff applied in small amounts with a needle and worked up to a hair-like texture. The chin scales are cut from 5 thou plastic card and cemented in place with Mek-Pak or similar liquid adhesive. The cap lines are made from stretched sprue and cemented in place again with Mek-Pak.

## Body and arms

Take the body from the Hussar kit and cement together. Allow to dry, then carve away all decoration and sand smooth. Using a razor saw carefully saw right through the body above the waist belt and insert a small wedge of scrap plastic, shown as a black area in drawing 11. When this is thoroughly dry it can be sanded to shape. Also sand down the waist belt so the inscribed lines just show through, as these can be useful when painting the figure as they are alternate gold-red-gold lines.

The arms come straight from the box. Again, carve off all raised decoration and sand smooth. Any slight gaps between the arms and the body are filled with Green Stuff which is sanded smooth when dry. The pouch belt is also cut from 5 thou plastic card about 2 mm wide. The pouch itself is sanded to about half its width from the back. Buttons are made by slicing



1 left-hand side of horse showing where to cut legs and wedges to be cut out of neck. 2 left-hand view of horse after modification with areas to be filled shown black. 3 right-hand view of horse showing cuts. 4 right-hand view of modified horse with filling shown black. 5 and 6 top views of neck showing cuts and method of bending and filling. 7 the curve to aim for on the neck. 8 hussar sheepskin — cut away shabraque (shown shaded). 9 modified sheepskin as described in text.



through Slaters Rod. Two rows of eight are shown in drawing 12. Epaulettes are from Historex spares.

## Legs

Are again straight from the box. The raised strips carved away and sanded smooth. The overalls can be extended down over the boots with Green Stuff. Also, fill any slight gap between the body and the legs and the joint line between the legs and sand smooth. The coatee tails are cut from 5 thou plastic card.

The cap lines come from the right hand side of the shako, as shown in drawing 13. They hang down the back, come up and are knotted at the back of the neck. They then go singly round the neck, again have a sliding knot at the front and finish up in acorns.

## Painting

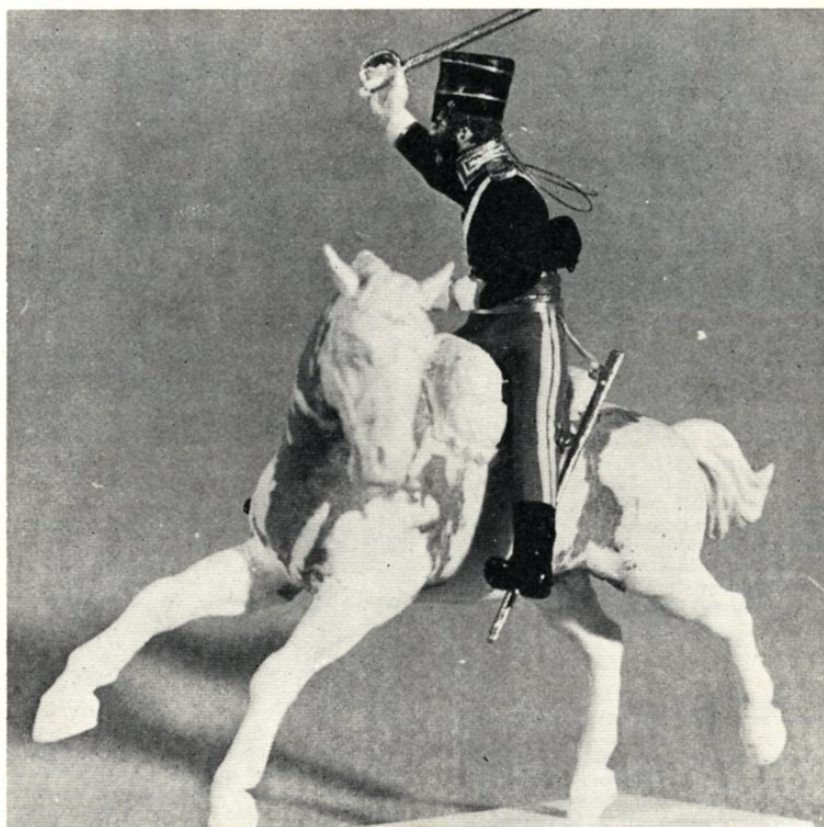
All colours given are in the Humbrol range, except that I prefer Airfix Flesh and Historex Gold Powder.

**Shako** — oiled silk — tarmac and black mixed, as this has its own sheen. Cap lines and chin scales — gold.

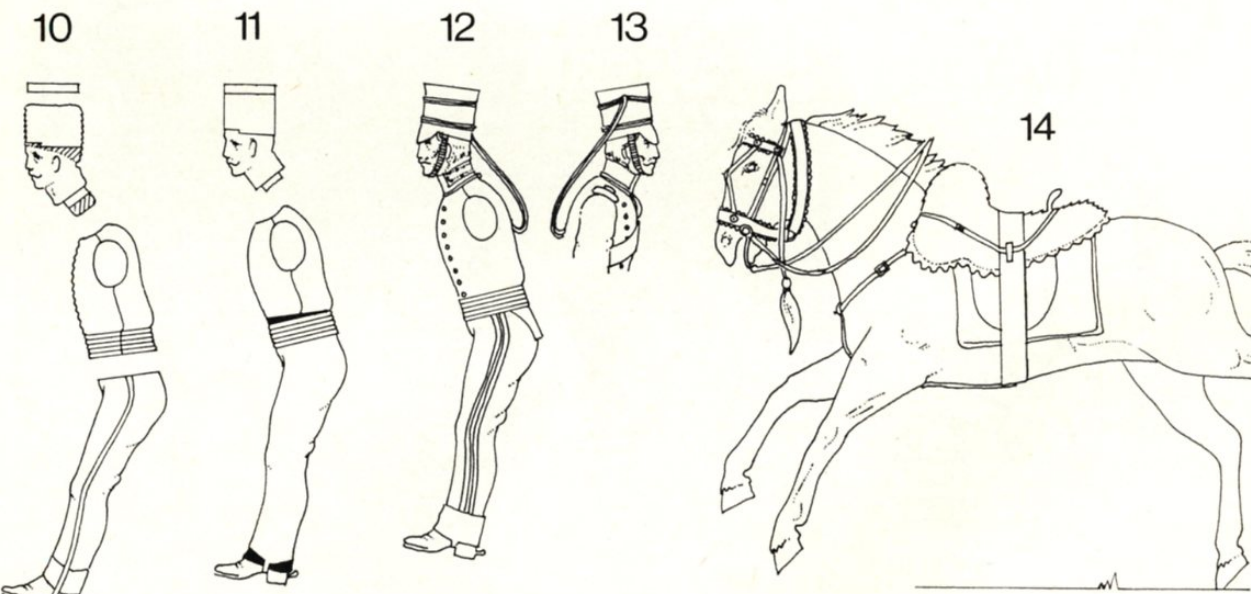
**Coatee** — navy blue. Collar and cuffs — white, edged in gold. Piping — white. Pouch belt — gold with fine white line running through centre. Decoration — silver. Epaulettes — brass. Waist belt — gold-red-gold-red-gold.

**Overalls** — mid-grey with a double white stripe separated by a fine grey one and reinforced with black leather. Boots — black. Sabre scabbard — steel. Belt — white. Spurs — steel.

**Sheepskin** — black, scarlet dogstooth edging, mid-grey blanket. All leather work — brown. Throat plume — white over red horsehair. All buckles — brass. Stirrups — steel.



Another view of the figure on the modified horse which clearly shows the extensive work needed to alter the neck. Don't shirk this work on the horse, because it is that as much as anything else which gives your figure individuality.



10 hussar figure showing areas to be cut away shaded and plastic card disc to be added to busby. 11 showing basic modifications to head now complete plus areas to be cut away and filled on body and legs. 12 left-hand side of figure showing new uniform details. 13 right-hand view of upper torso showing cap lines etc. 14 completed horse showing horse furniture details.

The scene: New York, May 1969.  
The event: The Daily Mail Transatlantic Air Race.

A small, stub-winged jet fighter swoops in from the sea and heads for Manhattan. As it nears the cluster of Skyscraper blocks it begins to slow down . . . slower and slower, until it's hardly moving at all. It hangs, incredibly, way above the ground, engines whining, dwarfed by gigantic buildings. Then, to the astonishment of watching Americans, it slowly descends to the ground. Hawker-Siddeley's Harrier — first operational VTOL combat aircraft in the world — has arrived.

The pilot, Squadron Leader Lecky-Thompson RAF, won first prize for the fastest overall London to New York time . . . just 6 hours 11 minutes 57 seconds!

The starting point was London's GPO Tower — so Lecky-Thompson hopped into his Harrier in a disused coalyard at nearby St. Pancras station. The finish was at the Empire State Building in New York — just one minute away from the pier on which he landed! 50 years after Alcock and Brown's first Transatlantic flight, Lecky-Thompson made history with a "Jump Jet".

Back in the middle fifties, Harrier, then designated the P.1127, was a private development by the Hawker-Siddeley and Bristol Engine companies. And, in common with many other highly regarded aircraft produced in Britain since the war, spent its formative years being jeered at by politicians and Air Staff. Eventually, two prototypes were ordered, and on October 1st 1961, the first 'hovering' flight was made — at a tightly tethered 18 inches off the ground



altitude! A further four prototypes were made for the Ministry of Supply and on September 12th 1961, the P.1127 demonstrated the swivel-nozzle transition from vertical to forward flight.

Now the project was gathering momentum and nine more P.1127's were built in 1964 for Service evaluation and were called Kestrels. These became known as the 'Tripartite Nine' as they were tested by a combined team from the RAF, US Army & Navy and Luftwaffe. By 1969, the P.1127 had become a production aircraft and named the Hawker-Siddeley Harrier.

The Harrier can fly at speeds of up to around Mach 1, yet can land in an area no larger than a tennis court. It carries a variety of under-wing rocket batteries and tanks and napalm service with the Marine Corps.

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Revell's choice of 1/32nd scale gives superb reproduction of authentic detail inside and outside the aircraft, a model length of 17 1/2" and a wingspan of 9 1/2". The kit includes extra decals, to enable RAF or US Marine Corps variant to be built; two missile pods, two cannon pods and two drop tanks. A removable panel reveals the intricate detail of the Pegasus engine and the unique swivel jet nozzles. Other features include movable wheels, a wealth of cockpit detail including instrumentation and pilot in flying kit.

The Harrier kit, priced at £1.70, is terrific value for money and is the latest addition to the Revell range of nearly 250 models, in which many famous aircraft, past and present, are featured. To find out more about the range send 20p to Revell for their full colour catalogue. For immediate action, take off for your local stockist and get the Harrier into service with your squadron.

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George Gush

# renaissance warfare

## Part 3: infantry missile weapons

FIRST, THE EARLIER, pre-gunpowder weapons; there were three of any significance, not counting javelins or 'darts' which were used by Irish irregular infantry as well as by light cavalry.

### The Longbow

The traditional English weapon; it could still be a battle-winner (Flodden 1513) and up to the 1560s most English 'shot' were still archers, especially on the Border, where the bow was preferred to the heavier and clumsier arquebus. After 1589 archers were dropped from the standard company organisation, and they officially disappeared by the mid-1590s, though there are a few signs of their use in England in the early 17th Century.

Longbows were often of yew, six foot to six foot four inches overall, and fired arrows of up to 37 inches long (though the only surviving example, which comes from our period, is 30½ inches).

There has been much debate about the performance of the longbow, but it would seem that the absolute maximum range, using the lighter 'flight' arrow (which was used in battle) was around 300 yards; with the heavier sheaf arrow used for armour-piercing it would probably be more like 170 yards, while to be accurate against individual targets or pierce mail it would come down to 80 or 100 yards; the weak points of plate armour could only be picked out at very close range.

The high rate of fire of the longbow was one of its chief advantages — up to six shots a minute was certainly possible, and this was far

above the performance of contemporary firearms (in fact Ben Franklin thought the American army of the 18th Century would do well to go back to the longbow!).

Its decline in the 16th Century is hard to explain in view of this very good performance, but the basic cause would appear to have been a growing lack of really well-trained archers — it took a lifetime to make an archer, a few weeks at most to train an arquebusier.

The other major factor — one easy to overlook — is that a longbow had a pull of some 80 pounds, and the performance of the bow depended entirely on the strength of the archer, whereas a puny and exhausted arquebusier could shoot just as hard and far as a fresh one.

Lesser problems were the difficulty of getting fresh ammunition supplies and the fact that bowmen had to expose themselves to enemy fire when shooting from entrenchments; an advantage was cost — bow with arrows 6s 8d, caliver 16s 8d!

In the late 15th Century the French still used the longbow, which they had adopted earlier, to some extent, and similar but probably rather smaller bows were used by the Scots and the Irish (in the former case being used well into the 17th Century).

### The Composite Bow

The traditional weapon of the East, used by Turkish infantry at least to the 1680s and by their cavalry and other Eastern horsemen until much later times. Constructed of laminated horn, horn and wood, or later apparently sometimes of metal, this type of bow was very effective.



English musketeer 1586. Note match, bandolier, flask and rest.

With half-ounce flight arrows distances of over 600 yards could be achieved, but these were not employed in war, and with the two-ounce, 24 inch war arrow range would be much reduced — an Arabic archery manual of the period says 175 yards, but Sir Ralph Payne-Galway states that a three-foot composite bow had a 118 pound pull, would shoot a war-arrow up to 300 yards and would pierce a half-inch plank at 100 yards; for accuracy and armour piercing range would be similar to longbow, and rate of fire would be at least as good.

### The Crossbow

Crossbows were still in very widespread use



Above a matchlock heavy arquebus or musket of the 17th Century as shown in the Tower of London. Right a Lanskecht ramming the charge home in his arquebus. Below right a German crossbowman of the early 16th Century, showing firing position. Foot of page an early arquebus, again from the Tower of London.

at the beginning of this period; found in nearly all European armies, they were used both in siege warfare and by skirmishers in battle. They were gradually replaced by firearms, which had much the same sort of performance (though one Polish writer suggests that by adopting firearms in place of crossbows, which they did in the 16th Century, the Polish infantry reduced their firepower to a fortieth of what it had been. Other evidence doesn't support this though). Marignano (1515) was the last battle in which they played an important role, though the French infantry preferred them to guns until at least 1523, and some remained in use up to the 1560s.

The usual 16th Century type was the heavy 'arbalest' which had a steel bow (often blued) and wooden rifle-type stock, and was 'spanned' or drawn with the aid of a separate windlass. Lighter types or 'latches', spanned with a lever or a ratchet rather like a car jack were also in use and would probably have been used by the mounted crossbowmen who were popular during the Italian wars.

The arbalest was as heavy as a gun (the bow could weigh 9 pounds, the windlass another 5 pounds) and almost as slow firing at one or two rounds per minute; like an arquebusier the crossbowman could take cover behind a wall or parapet and benefit by resting his weapon on it while firing. A crossbow was very accurate up to some 60 yards and might have an absolute maximum range of nearly 400 yards; the armour piercing performance of its short, heavy bolts, while probably not up to that of firearms, would be much better than the other bows, especially against plate.

### Firearms

#### The Arquebus

(or hachebuchsen, hagbut, hagbush, harquebus etc — 'hook gun')

The chief infantry firearm of the 16th Century, used by mounted men too; it remained in use for skirmishers and cavalry into the 17th Century.

The arquebus developed from the clumsy handguns of the 15th Century, probably in Germany, by the development of a simple lock mechanism around the end of the century, by which a pivoted 'serpentine' held the glowing 'match' (cord soaked in a saltpetre solution),

and dropped it on to the pan, hopefully firing the gun, when some type of trigger was pressed.

This cheap and simple 'matchlock' mechanism was used for nearly all infantry weapons throughout the period, though in fact guns with no lock at all remained in use in the early 16th Century.

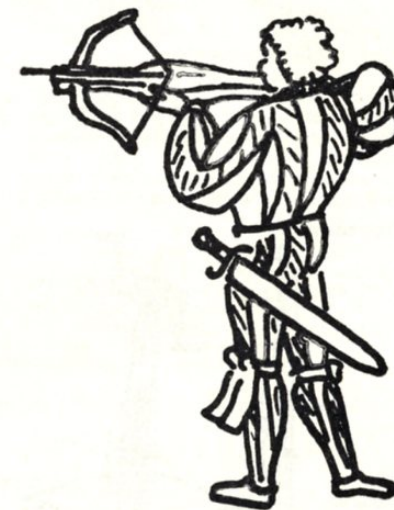
The other development was a proper butt (possibly the 'hook' which gave the gun its name), in the early 16th Century often held against the chest or cheek (ouch!), later against the shoulder.

In the earlier 16th Century arquebuses were of no particular size, the largest being almost light field guns (a German Doppelte-Doppel-Haken was seven feet long, weighed 50 pounds and fired a six ounce ball to about 500 yards). Such guns needed two men and were sometimes mounted on carts or walls. There was an unbroken range down to little half-hakes firing a ball of 20 to the pound. The most common types seem to have been about 3 feet 6 inches long, firing a 1½ ounce ball and weighing around 10 pounds.

From the 1540s there seems to have been a growing standardisation on two types; the heavier one was the musket (see below) the lighter what was called in England a 'Caliver' (from calibre, which, originally in France, was now more or less standardised). Such weapons were around four feet long, 12 pounds in weight, and had a calibre of 0.5 to 0.75 inches, firing lead balls of 10 to 16 to the pound. Maximum range of the best Italian arquebuses, carefully loaded, was said to be about 400 yards but effective range in battle and certainly accurate range would be much less.

A target range at Augsburg in 1508 was 226 yards long; and English caliver-men of Elizabeth's reign were supposed to be able to hit the mark at 200 to 300 paces, so it might be reasonable to suppose that arquebuses would be reasonably effective up to perhaps 200 yards, at least against large targets.

Loading was a major problem requiring at least 16 drill movements and three hands, and the need to remove and hold in one hand the lighted match, while messing about with loose gunpowder, must have made the whole procedure quite exciting. Early in Elizabeth's reign 12 rounds an hour was apparently considered fair going, and even by 1600 English



Below left a 16th Century musketeer supporting his weapon on a rest as described in the text. Centre an arquebusier, and right a Lanskecht firing arquebus. All Miniature Figurines figures painted by the author.







English longbowman and billman from *Miniature Figurines and Hinton Hunt* respectively.

calivermen only managed 40 shots an hour — and at that they claimed to fire twice as fast as musketeers!

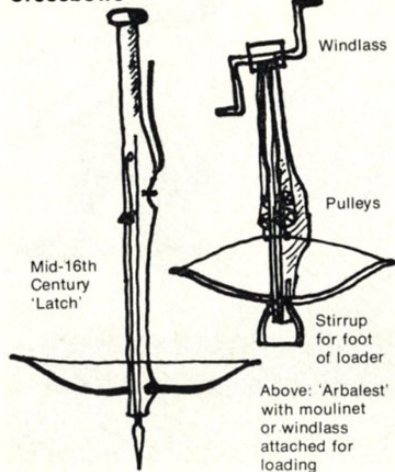
A factor in increasing the rate of fire was the development of the bandolier, from which dangled, usually, 12 wooden cases, each with powder for one shot; bullets were carried separately in a bag and priming powder in a flask or horn. Paper cartridges would have helped still more but, although invented in the 16th Century their first use with infantry firearms seems to have been by the Swedes in the 30 Years War (1618-48).

## The Musket

So far as I can see 'musket' was simply the name applied to the heavier and longer-barrelled types of arquebus from about the 1540s onwards; like them it required a forked rest to support it in action and the early Spanish muskets had a crew of two. The Spanish were the first to use it on any scale; their muskets differed from English, German and French ones in having a straight rather than curved stock (Sir Roger Williams, in his *Brief Discourse of Warre*, 1590, said the Spanish type was better for taking recoil).

Even in Spanish service, however, the musket was greatly outnumbered by arquebuses for a long time — in the 1580s the Duke of Alva's armies in the Netherlands had only one musketeer to every seven arquebusiers; and others were slow to take up such weapons at all (the French army did not

## Crossbows



use them until 1573). By the end of the century, however, they had become standard in several armies, including those of France and Holland.

It is difficult to give very precise details of muskets, particularly as there were 'double-' and 'half-' muskets in use as well, but a length of about six feet, weight of 16 to 20 pounds, and bullets of about 2 ounces would seem to be fairly typical in the 16th Century; in the 17th there was a strong trend toward reduction in size and weight — English Civil War muskets were 'only' 10 to 12 bore, and Gustavus Adolphus reduced the weight of Swedish ones to 11 pounds. However they retained the long barrel which gave them greater velocity and range than the lighter types of arquebus, and the use of a rest remained necessary up to the end of the period.

There were many stories of muskets killing up to 500 yards, and they certainly would have much greater range than earlier weapons coupled with much higher armour-piercing capability — in fact the spread of the musket was probably the main cause of the decline of armour which took place at the end of the 16th and in the 17th Century. I would think that for wargames purposes muskets should be allowed at least 100 yards margin over lighter arquebuses.

Early forms of flintlock appeared in the 16th Century, and offered considerably higher rates of fire than matchlocks, but extra expense seems to have confined them during our period to bodyguards, mounted troops and men detailed to guard artillery trains (who, surrounded by gunpowder, found it safer not to play with matches).

Rifling was also introduced in the 16th Century, and offered much higher accuracy (one school of thought attributed this to the fact that devils could not cling to a spinning ball) at the cost of much slower loading, and, possibly, reduced range. The number of rifled guns in the inventories of German arsenals of the 16th Century makes it seem as though they were probably intended for military use, and some were certainly used by 'snipers' during the English Civil War, though these were usually gamekeepers and the like who had brought their civilian weapons with them.

## Formations

Crossbows and composite bows were the weapons of open-order skirmishers; longbows were also used like this sometimes, but could also operate in closer formation, rear ranks firing overhead. Firearm infantry, unless they were detailed to form a 'forlorn' or skirmish line, were usually formed in 'order' (three feet spacing between files). Ranks fired in succession by counter-marching — either the man at the front firing and then going to the rear to reload (in which case the whole formation moved slowly back) or the man at the rear coming to the front to fire (when it advanced). In the 16th and early 17th Centuries six to ten ranks deep was usual, to allow time for reloading before getting to the front again; 17th Century reforms will be dealt with in a later article.

Shot were normally drawn up either as wings on either side of their pikemen, or two or three ranks deep all round a pike square, but again particular national methods and so forth will be considered later. □

# first principles

Bruce Quarrie

CLOSELY RELATED to last month's subject of research is thinking ahead, and most important of all, *patience*. It is attention to detail which sorts out the men from the boys in plastic modelling, and the key to success is, simply, patience. So if you are one of the many modellers who can't resist the temptation to spill all the parts from your kit box on to your worktop the moment you get home, and rush through the assembly so as to get on to the interesting work of painting and applying markings — stop!

Take it easy. Don't, above all, try to open the box on the way home to examine the contents — this is the easiest way to make sure of breaking or losing a vital part. And when you get home, don't just tip the parts out and start assembly without thinking: take the sprues out one by one and look at them carefully. Check the parts off against the instructions to make sure you've got them all — there is nothing more infuriating than getting halfway through a model and suddenly realising that something is missing! If there is a part missing, fill in the complaints slip enclosed in practically all kit boxes and post it off immediately. Most manufacturers practice a fairly quick spare parts service, and you should not have to wait longer than a few days for your part. In the meanwhile your time need not be wasted because you can spend it on extra research for the model.

Once you are satisfied you've got all the parts, you can begin assembly. So far as possible, follow the kit instructions and you won't go far wrong — although occasionally a manufacturer tells you to do something impossible, and as a guard against this the kit reviews in modelling magazines are often a good guide.

Use the cement sparingly, and paint as many parts (especially aircraft interiors, cockpits etc) before assembly, or you may find areas of the basic plastic colour showing through on your finished model. Check whether the vehicle is going to need any weighting and if so place some lead shot or plasticine in position before cementing the fuselage halves etc together (aircraft with tricycle undercarriage are particularly prone to tail-heaviness).

Check each section of assembly when you think you've completed it: if you can, touch up any bits you missed with your paintbrush earlier. Clean up any excess glue with a sharp knife after it has set and rub smooth with fine glasspaper. Using your research material as a guide, add any extra little details you can think of such as control columns, pitot heads, radio aerials and so on as you go along. The result will be a well-finished model without missing parts, unpainted components or glue smears, and the additions you make from your own information will add up to an individual model you can feel proud of.

AIRFIX magazine

# squadron codes and colours 1939-1956



By Michael J. F. Bowyer and John D. R. Rawlings

**C 236 OCU (c)**  
When the letter 'C' was adopted this unit was flying Lancasters and Shackletons. Previously it was coded 'K7'. It also used Neptunes. In October 1956 it was renamed Maritime Operational Training Unit. Examples of aircraft used: Lancaster GR3 C:L-SW286, Neptune C:G-WX508 and Shackleton 1 C:O-WB829. 'Re-coded' MOTU late 1956.

**CA 189 Squadron (c)**  
Formed at Bardney October 15 1944, in 5 Group and flew Lancaster I/IIIs, eg CA:W-PA182. Disbanded November 20 1945.

**CB 31 Squadron/Metropolitan Comm Sqn**  
Carried by 31 Metropolitan Comm Sqn to when 31 Sqn reformed at Hendon July 19 1948. Used mainly Ansons. Became the Met Comm Sqn again in March 1955, unit retaining codes until about June 1958, on Ansons. Aircraft used included Dominie CB:Z-NF885, Anson XII CB:S-PH716, Anson 19 CB:N-VM351 and Devon C1 CB:A-VP952.

**CC 390th Bomb Group, USAAF (c)**  
Carried on B-17s of 569th Bomb Sqn July 1943-August 1945.

**CD ?**  
No evidence of allocation.

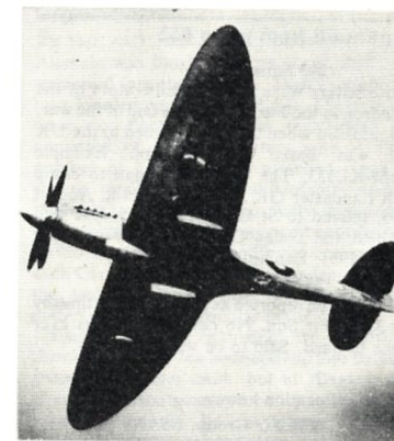
**CE 5 Lancaster Finishing School (c)**

Carried by Lancasters of 5 Group's Finishing School. Formed November 21 1943, disbanded March 31 1945. Example: CE:T-W4328.

**CF 625 Squadron (c)**  
Formed October 1 1943, at Kelstern, mainly from 'C' Flight of 100 Sqn. Example: CF:B-ME594. Disbanded October 7 1945.

**CG 55th Ftr Group, USAAF (c)**  
Carried on P-38/51s of the 38th Ftr Sqn September 1943-July 1945.

**CH 358th Ftr Group, USAAF (c)**  
Carried by P-47s of the 365th Ftr Sqn from October 1943 to November 1945.



Spitfire PR XIX PM655 6C:W of the PRDU (J. D. R. Rawlings archives).

**CH Station Flight, Swinderby (c)**  
Allocated for sure, but no evidence of use is to hand.

**CI 392nd Bomb Group, USAAF (c)**  
Carried by B-24s of 576th Bomb Sqn from August 1943 to June 1945.

**CI Unknown**  
Reported as worn by Wellington 14s based in the Channel Islands in 1945. This may have been another code reported in error.

Continued on page 656

# New edition of a bestseller How To Go Plastic Modelling by Chris Ellis

Every newcomer to the plastic modelling hobby should have a copy of this book, the standard work on the subject. Now in its third edition, *How To Go Plastic Modelling* has been completely reset, and revised to take account of developments in the plastic construction kit field since 1970. It includes many new photographs as well as two new kit conversion projects. The book begins with a history of plastic kits, then gives detailed guide-lines on how to begin plastic modelling, choosing the right tools and materials, improving basic kits, research, painting, decals, finishing and display. Finally, there is a beginner's 'conversion course' giving instructions for altering a variety of aircraft, military and ship models. Useful appendices list the main manufacturers, societies, libraries, museums and books.

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Continued from page 655

**CJ 203 Squadron (c)**  
These letters were worn by Liberators of the squadron in the Far East by the end of the war, and retained when the unit returned to the UK and was based at Leuchars. Example CJ:M-KL533. The squadron began to equip with Lancaster GR 3s at Leuchars in August 1946, moved to St Eval in January 1947 and retained the code 'CJ' which it wore until March 1951. Example: CJ:A-SW337.

**CJ 352nd Ftr Group (?)**  
'CJ' has been reported as in use at some time by the 328th Ftr Sqn. No confirmation has ever come to hand. Said to be worn on P-51s.

**CK ?**  
No unit allocation known.

**CL 55th Ftr Group, USAAF (c)**  
Carried by P-38/51s of the 338th Ftr Sqn between September 1943 and July 1945.

**CL Station Flight, Little Staughton (c)**  
Allocation confirmed, use unknown.

**CM 107 OTU (c)**  
This unit formed at Leicester East on March 5 1944 and was equipped with Wellingtons, eg CM:N-MF504.

**CM 1333 Transport Conversion Unit (c)**  
No 107 OTU was re-designated 1333 TCU on August 1 1945 and used Wellingtons with CM coding and later Dakotas, eg CM:O-KG434. About November 1947, 1333 TCU was renamed TSTU.

**CM 42 Group Communications Flight (c)**  
Letters allocated to this unit but no confirmation of use in to hand.

**CN ?**  
No unit allocation known.

**CO ?**  
No unit allocation known. Evidence to hand links Mosquito VI HR176 with the coding CO:X; this aircraft served progressively with the FIU, 9 MU (4.47-6.49), 11 Sqn (6.49-8.50), then passed to 15 MU. Wellington X ME974 is reported to have been coded CO:W, but no information is to hand about the units with which she served.

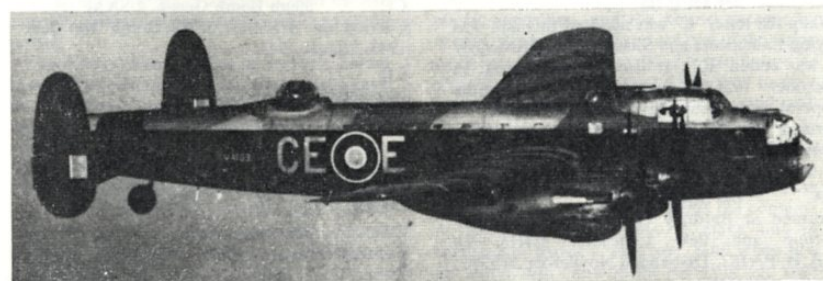
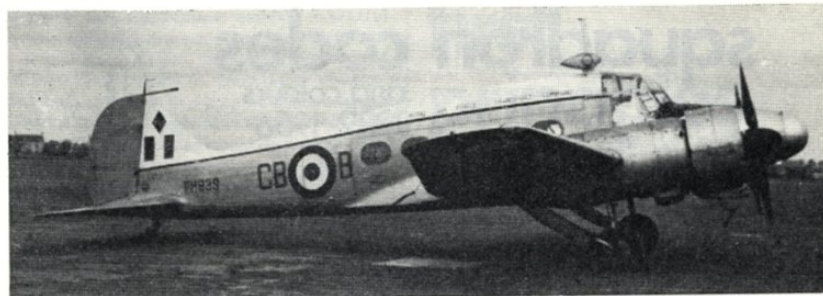
**CP 358th Ftr Group, USAAF (c)**  
Carried by P-47s of the 567th Ftr Sqn from January 1943 to November 1945.

**CP Station Flight, Topcliffe**  
Allocated for sure, but no evidence of its use is to hand.

**CQ 447th Bomb Group, USAAF (c)**  
Carried by B-17s of the 708th Bomb Sqn from November 1943 to summer 1945.

**CR 162 Squadron (c)**  
Reformed at Bourn, Cambs, on December 18 1944 and flew Mosquito XXVs, eg CR:C-KB415. Retained after the war when the squadron, based at Blackbushe, operated the air letter and mail delivery service throughout Europe. Disbanded July 14 1946.

**CS 513 Squadron (?)**  
The letters 'CS' have often been quoted for 513 Squadron, a formation about which little has been written. The squadron formed at Witchford September 15 1943 and received its first two aircraft, Stirlings from 75 Sqn EE958



Top Anson C 12 PH839-CB-B of the Metropolitan Comm Sqn (J. D. R. Rawlings). Above Lancaster W4103-CE-E first served as OL:S of 83 Sqn before passing to 1668 HCU. Later used by No 5 Lancaster Finishing School (IWM)

and EF465, late October. Towards the end of November 1943 its aircraft were posted to other units including 75 Sqn and 1660 HCU and most personnel to 1653 HCU Chedburgh. CS:S has been reported to have been EF441/G, but this aircraft is not believed ever to have served 513 Sqn having been allocated only to 90 Sqn and 1653 HCU.

**CS Station Flight, Upwood (c)**  
Used on Oxford of the unit, including LX527:CS shortly after the war.

**CT 52 OTU (?)**  
Letters said to have been used by this unit; unconfirmed.

**CT 448th Bomb Group, USAAF (c)**  
Used on B-24s of 712th Bomb Sqn from November 1943 to July 1945 — which suggests that the reference to 52 OTU is incorrect.

**CU ?**  
No unit allocation known.

**CV Station Flight, Tuddenham**  
Although CV was of course used by No 3 Sqn (RAAF) in the Middle East on Kittyhawks, eg CV:J-AK581 and Mustangs, eg CV:P-KH716, post-war the combination was allocated to Tuddenham. No details are known.

Shackleton MR 1A WB848:C-K of No 236 OCU, Kinloss, photographed at Blackbushe September 9 1953.



**CW ?**  
No unit allocation known.

**CX 14 Squadron (c)**  
First carried on the squadron's Wellington XIVs between September 1944 and June 1945, eg CX:K-NB909. Re-introduced when 128 Sqn was renumbered 14 Squadron on March 31 1946. Squadron first flew Mosquito B16s like CX:F-PF544. Received B35s in 1948, eg CX:A-TH999. Vampires came into use at the start of 1951 and may have for a short time carried CX identity.

**CY Station Flight, Ludford Magna**  
Post-war allocation. No details of use.

**CY 55th Ftr Group, USAAF (c)**  
Carried on P-38/51s of the 343rd Squadron September 1943 to July 1945.

**CZ 84 OTU (Probable)**  
Letters reported to have been carried by Martinets including HP354; CZ-P. This latter machine served with 84 OTU from June to November 1944.

**Abbreviations**  
(c)=Confirmed.  
(?)=Unconfirmed.

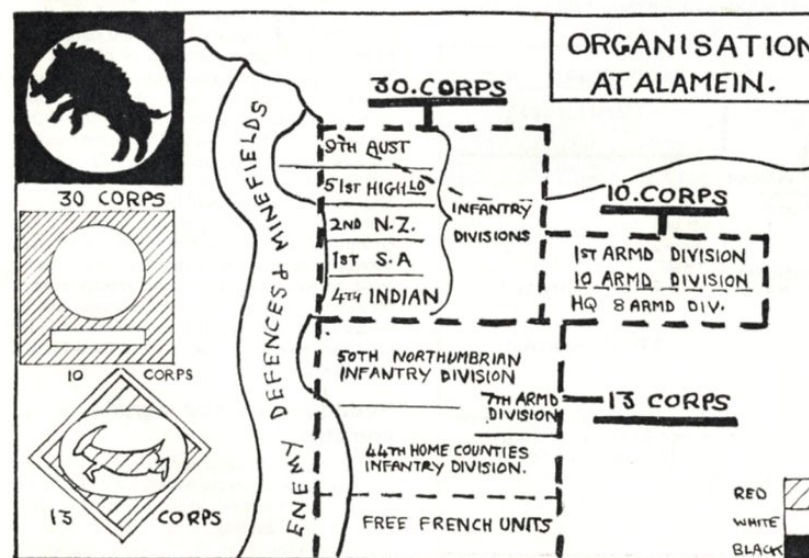


# 8th army in the desert

## Part 2: Headquarters troops by John Sandars



Plate A Brigade staff officers in the desert. These 1:32 scale models are converted from Britains and Hills figures. The three on the left were military figures in metal, the second from the right was a station master, also in metal, while the right-hand figure is a combination of plastic garage mechanic and farm hand. Below Fig 1.



## Organisation

BY THE AUTUMN of 1942, when the battle of Alamein was fought, the 8th Army had been organised into three Corps, each commanded by a Lieutenant General (Fig 1). These Corps were not fighting units in themselves but consisted of a Headquarters with a small number of Corps troops attached, such as signals, medium artillery, and infantry support tanks, which were not normally included in lower formations. A varying number of fighting Divisions were placed under the command of each Corps, the number and type depending on the task that the Corps was required to undertake in any particular battle.

Earlier in the campaign the Divisions themselves had often been split up into Brigade groups or smaller units, but at Alamein and after it was Montgomery's policy to keep them intact, although he switched complete Divisions from Corps to Corps as the situation demanded.

At Alamein the ten available front line Divisions were grouped as shown in Figure 1. This produced one Armoured Corps with two Armoured Divisions (and one dummy Division, consisting of headquarters only, designed to deceive the enemy into thinking that there was another Division by its signal traffic), one Infantry Corps of five Infantry Divisions, and a mixed Corps with a weak Armoured Division and two Infantry Divisions. This grouping was designed to implement Montgomery's plan of attack, which required a heavy infantry assault in the North to clear a way through the minefields and other defences to enable the armour to break out, while holding and threatening the southern flank.

The organisation of Infantry and Armoured Divisions will be described in future articles.

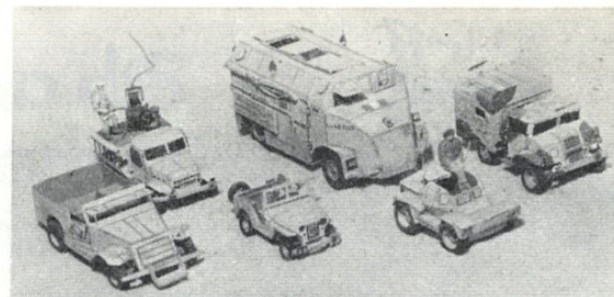
## Headquarters troops

Headquarters are less frequently modelled than fighting units, but nevertheless they often make interesting subjects for order group or conference models, and so some knowledge of their composition and function can be useful.

Whatever the level of the HQ, its organisation was based on the same principles. So, although Army HQ, and that of a Brigade were vastly different in size, and in the ranks of the officers heading the various branches within them, the main branches and the functions that they performed were basically the same.

All HQs were naturally headed by the CO of the unit in question, whether it was the Army, a battalion, or anything in between. Beneath him the staff was split into three branches, firstly the 'G' or operational branch, the senior officer of which acted as chief staff officer and co-ordinated the HQ as a whole, and then the 'A' and 'Q' branches which dealt with the personnel and material sides of administration respectively, and were combined in lower formations. In addition to the staff various other troops either formed part of, or were attached to HQs. As well as the signals unit, HQ defence troops, and military police, it was usual for the commanders of sub-units such as artillery, medical, RASC and REME, who did not need to physically lead their troops into battle, but did need to be in close touch with the





Left, Plate B staff officers and military police. These 1:76 scale wargame models are all simple conversions of Airfix military and civilian figures, with a Minitank motorbike. In most cases only the heads have been changed, but note how a firing rifleman has been converted to an MP by cutting away the rifle, twisting the head and cutting the pouches to look like pistol equipment. Above, Plate C HQ and signals vehicles. 1:76 scale scratch-built models and conversions from Minitanks, which include an ACV, light wireless truck, cable laying truck, scout cars and jeep.

Commander to co-ordinate their resources as he required, to live at HQ (see Fig 2).

The 8th Army HQ was so large that it had to be split into three. Montgomery himself had a small tactical HQ close to the front, consisting of his ADCs and Liaison officers, a 'G' staff officer and necessary signals. The main HQ was a more static organisation run by the Chief of Staff, Major General de Guingand, and had 'G', 'A' and 'Q' staffs necessary for conducting the battle, along with the commanders of the Army artillery and services. Further back in Cairo, closely connected with Middle East HQ, was the rear HQ, which was the largest in size, and consisted mainly of administrative troops concerned with supplies, reinforcements, major tank and vehicle repairs etc.

These various staff functions will be mentioned again in later articles on the fighting units. In the meantime modellers will want to know what distinctive clothing, if any, would be worn by HQ personnel. Among the lower

formations there was no difference from the fighting troops, except that caps might replace tin hats when not under fire, and map boards and binoculars might replace webbing and small arms. As one goes higher up the tree uniform tended to be more correct (with the notable exception of that worn by the army commander and certain other generals) and less desert-worn, until the stage was reached where some officers in Army rear HQ, by virtue of their expensive clothing and general elegance were known irreverently by the fighting troops as the 'gabardine swine'.

There were distinctive armbands for staff officers (see Fig 2) but these were not worn on active service, although I have seen a picture of officers from the New Zealand Division wearing them at a parade. The red cap bands and collar tabs of generals and senior staff officers were, however, often worn, even sometimes in action. In general at HQs behind the fighting areas there were more tailor-made khaki jackets with gilt metal badges, and fewer

issue battledress blouses, with detachable cloth ones, to be seen in winter; while in hot weather collars and ties with lightweight tunics, or open necked bush jackets tended to replace the desert shirt and shorts (see plate A).

Military police, whether in battledress or summer rig, still wore white webbing, red topped caps, and black and red MP armbands. White pull-on sleeves were also sometimes worn when directing traffic, and when under fire a steel helmet with a red band round it was used. A point sometimes forgotten by modellers is that there were no privates in the CMP, so any military policeman must be at least a lance-corporal (see plate B).

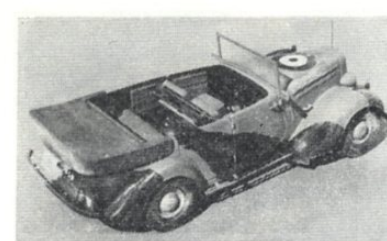
### Signals troops

Royal Signals units were responsible for communications down to Battalion HQ level. Below this the units' own signallers, who were suitably trained infantrymen, gunners etc, took over. Signals units were designated by the formation HQ which they served, ie there would be Corps signals, Divisional signals etc, rather than a signals company or platoon.

These formation signal units were split into wireless, telephone and despatch rider sections. There is a tendency to think that wireless was the only means of communication used in the Desert, and of course between mobile forward troops it often had to be, but all HQs and rear areas relied heavily on telephone links, and much of a signal unit's job involved laying and maintaining telephone lines, often between frequently moving HQ camps. Motor cycle despatch riders were not greatly used in the desert itself due to the lack of roads, and the difficulty of staying on a motorbike in loose sand, but jeeps and trucks were used for the same purpose.

### Headquarters and signals vehicles

Staff cars, both open and closed, estate cars, and 8 cwt pick-ups were widely used by officers for personal transport, as were jeeps and scout cars in the fighting areas. The armoured command vehicle, or ACV, was designed for



Above, Plate G Humber staff car from the Airfix 1:32 scale kit by Chris Pearce. Note air identification roundel on the bonnet. Earlier in the campaign a white St Andrew's cross was sometimes used for this purpose, but often there was no indicator. Top right another view of the vehicles depicted in Plate C. Second from top, Plate D scratch-built 1:32 scale HQ vehicles. A Daimler scout car is now available from Tamiya in 1:35 scale. The caravan has been made from an Austin K2 ambulance, and would be an easy conversion in 1:76 scale from the Airfix model. The command vehicle is an AEC. Third, Plate E a telephone cable laying truck in 1:32 scale. This is a scratch-built Morris 15 cwt, a type common in the early days but replaced by Chevrolets and Fords by the time of Alamein. Figures are from Britains plastic zoo keepers, garage mechanics and farm hands. Bottom, Plate F a Guy heavy wireless truck, Morris 15 cwt and despatch rider's motorbike scratch-built in 1:32 scale.

use both by signals and staff down to brigade HQ level (see plates C and D) and by the time of Alamein most senior officers had caravans to sleep in, which had been converted from standard lorries and ambulances.

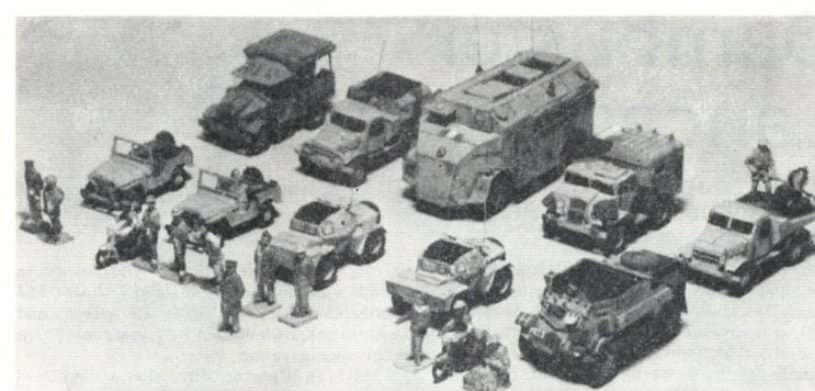
In addition to the ACV, signals units used specialised line-laying and battery charging vehicles (see plate E) as well as several types of soft skinned wireless truck (plates C and F).

When static the working space of HQ vehicles was often increased by rigging canvas penthouses, like lean-to sheds, alongside them. Camouflage nets were also extensively used against aircraft, and vehicles were parked well away from each other.

### Models and references

Figures Apart from 1:32 scale Montgomery figures, of which the Rose metal, and the recent Airfix plastic model are good examples, there do not seem to be many specifically HQ figures available, but as can be seen from the illustrations to this article any number of commercially available military and civilian figures can be fairly simply converted to serve the purpose. Variations on Humbrol khaki and khaki drill are a good painting basis.

Vehicles The Airfix Humber staff car (plate G) in 1:32 scale is currently available complete with driver and Montgomery figure, as are the Tamiya 1:35 and Renown 1:76 scale Daimler scout car kits. There are various makes and



scales of jeep to be had, and the Renown 1:76 Bedford 15 cwt makes a good HQ vehicle. Humbrol provide various useful sand and stone colour paints.

The Bellona series *Military Vehicle Data* booklets give useful details (including the Guy Wireless truck shown in plate F in MV Data No 1), as does the *Observers Fighting Vehicle Directory WWII*, by Vanderveen, published by Warne. Other information can be got from John Church prints. *Airfix Magazine* of August 1970 gave details of the Dorchester armoured command vehicle together with 1:76 scale plans. This can easily be constructed from plastic card on the Airfix 'Matador' chassis.

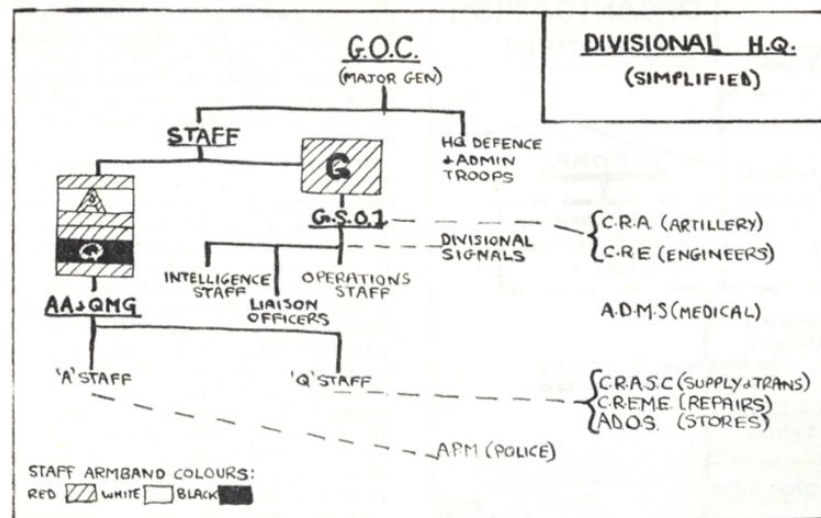
*British Military Markings 1939-45* by P. Hodges (Almark) and *Military Vehicle*

*Markings Parts 1 and 2* by T. Wise (Bellona) are both useful for vehicle signs and numbers.

### General references

The following are useful sources of information on the build-up, organisation, and HQ troops of the 8th Army: *The Desert Rats*, by Verney. Hutchinson 1954; *Alamein*, by Lucas Phillips. Heineman 1962; *Operation Victory*, by de Guingand. Hodder & Stoughton 1947; *Lindsells Military Organisation & Admin*, Gale & Polden 1950; *Introduction to the Staff*, by Jessel. Gale & Polden 1947.

Next month's article will describe the infantry formations of the 8th Army and details of their equipment.





# Dambuster Lancaster

Much-requested conversion from the Airfix kit described by **Gerry Preece**

THE RAID ON the Mohne and Eder Dams on the night of May 16-17 1943 has always had a strong fascination for me, starting with the BBC announcement on the morning of the 17th. The official bulletin made no mention of the months of hard work that went into the development of the special bomb, or the technique required for the attack.

Interest still smouldered over the years, then by chance, in 1955, I came across the paperback editions, side by side, of *Enemy Coast Ahead* by the late Guy Gibson, VC, and Paul Brickhill's *The Dam Busters*. Needless to say I bought both on the spot! These two books started a burning desire to build a model version of the Lancaster. All I could find out was that the bomb doors were removed, and Guy Gibson's remarks gave me the impression that this was no ordinary bomb! Then in 1958, a friend told me that Airfix were about to release a 'Lancaster' kit. I bought my kit the first day it arrived in Birmingham, with the firm intention of converting it. I still searched after data on these aircraft, but nobody mentioned the fact that it was still classified! In October 1962 this data was released, but it still left quite a few questions. Then Bruce Robertson's *Lancaster* book was published in 1964, and at last I could start. This was my first conversion. I had not heard of IPMS, or the fact that plastic card existed. I wrote to Mr R. W. Mathews, of

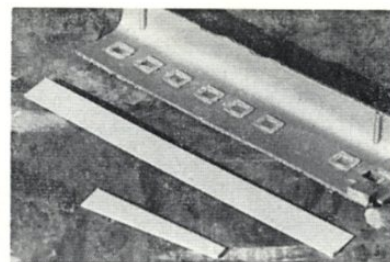
*Flying Review International*, who put me in touch with Bob Jones, of IPMS. I also had correspondence with Bruce Robertson, and wish to acknowledge the help that these three gentlemen gave me.

This is an all plastic conversion, and requires a polystyrene cat litter box, or seed box, and a scrap Bristol Freighter. If you have not access to the Freighter, the corner section from the cat/seed box can be used. The Lancaster kit itself is quite a good one, despite its age, and will provide the basis for a really good model. Actual working time, and time checking and rechecking and working out the whys and hows, was spread over four years.

## Stage 1

Clean up fuselage joints, using an eight inch smooth flat file, placed across fuselage half, and used with a gentle polishing action. The joints are moulded with a slight angle. The file will take off the shine on the plastic, and is a very good guide as to how far to go: just enough to remove the shine, then stop!

Clean up the window apertures, enlarge the two side windows as shown on drawings, mark out and drill and file the two windows in the nose. Then very carefully, cut out the mid-upper turret fairing, following the joint line that is clearly defined in the mouldings. Cut



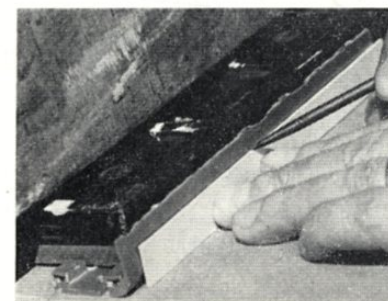
Section cut from Bristol Freighter fuselage and card templates.

away the bomb doors, but save the pieces. Clean up edges of bomb bay up to inner edges moulded in fuselage halves. Check with drawing, as this is important. Now take the cat box/seed box, and cut two spars, cementing one in each side of the fuselage halves, across this opening and flush with the fuselage edges. Place on one side to harden.

The front fairing can now be constructed. Take a Bristol Freighter fuselage half, and cut a section 5½ inches long as shown in the photograph. Using the drawings, mark out and cut from thick card two templates, one for the sloping sides, the other half the width of the fuselage. Clamp the 'window' side of the freighter section against a flat surface and place the long edge of the card underside template hard up against this surface, and scribe a line on the bottom surface of the freighter section. This line is the centre line of the front fairing. Cut along this line and clean up. Mark off the centre between the freighter fuselage location dimples, and cut in two. Now clamp the bottom surface of freighter sections against the flat surface, and using the template, scribe off the tapered sides. Make sure that you mark out

port and starboard sides. Cut along line and clean up. Clamp fuselage halves together with elastic bands, and check for fit of fairing halves before cementing. If fit is satisfactory, apply cement to both halves of fairing and hold firmly together for a few minutes, then place aside to dry out overnight.

Obtain a plastic food box that has sides as thick as the width of the fuselage windows, or an equivalent sheet of Polyglaze. Using a fine saw, cut strips 3/16 inch wide, clean up the long edges, and polish using toothpaste on a piece of flat glass. Then cut to fit windows as shown in drawings, apply cement very carefully, to 'shoulders' and press into place. Next step is the flight deck. Cut a slot 1/16 inch wide between the pilot's rostrum and flight engineer's seat. Clean up cut edges, and fit flight engineer's cushion, cut from 30 thou card. Discard kit control column and use column from Bristol Freighter. Fit arms to pilot's seat, cut and fit rudder pedals and armour plate to pilot's seat. Cut throttle control from thick plastic, and fabricate throttle levers from heat stretched sprue. Fit extension to pilot's rostrum, and cut cockpit floor extension from 30 thou card. Navigator's table and end panel

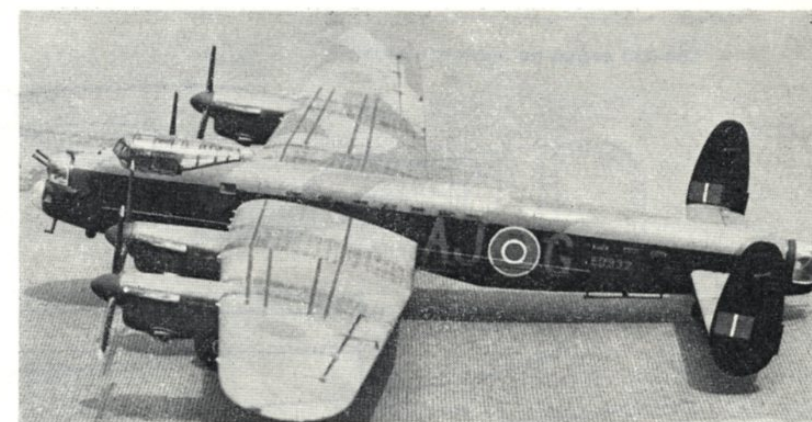


Photograph showing method of scribing centre line on to front fairing. The side template is used in the same way.

can be cut and fitted, also half bulkhead between navigator and radio compartment. Paint the assembly and place aside.

Now take the front fairing, square up the ends, and cut the rear end bulkhead. Note that this extends into the fuselage. Taper the fairing sides as shown in the drawings, and file to blend front end into fuselage. This will slightly concave the underside of the fairing when viewed from the side. Study of photographs will prove this is correct. Cut out recess for bomb drive wheel and slot for drive belt: note — starboard side only. The drive wheel is an Airfix Firefly wheel hub, with a 'V' groove filed round the rim. Again clamp fuselage halves together with rubber bands, keep clear of bomb bay! Cut and fit two bracing pieces from the strongest tubing you can find. These must be first class push fit, not too short and not too long, but bang on! Drill a very small air hole in the centre of these tubes to ensure the cement really hardens. Place in position, but do not cement at present.

Now comes a cunning move. Take a piece of notepaper approximately 3 x 2 inches and draw a centre line lengthwise. Place this paper over the opening of the mid-upper turret position, line the centre line up with the fuselage joint line, hold firmly in place, and run a forefinger



Another view of the completed model.

carefully all round the edge of the opening. You now have a paper pattern with the outline of the opening creased into the paper. Pencil in this crease line. Now take the fuselage bomb doors, and using what would normally be the bottom joint, as the top fuselage joint line, prick through the paper pattern. Cut round these dots, clean up with a file, and presto! you have the hole covered up! It is also possible to very closely match the rivet lines up. Cement these into place applying cement to both edges. Additional lengths of sprue should be cemented over these covers inside the fuselage. This area is the focal point of everybody's attention, and has to withstand quite a lot of inquisitive probing. So, be warned! Place aside to set hard.

## Stage 2

The elevators now come under attention. These are filed down to a fine trailing edge, an operation which also removes moulding dimples. Reshape to outlines in the drawings, and cut out the hinge slots. Cement tailplane halves together and allow to dry, cut the fins away from the rudders, clean up the fins, and cut and shape new rudders from the cat/seed

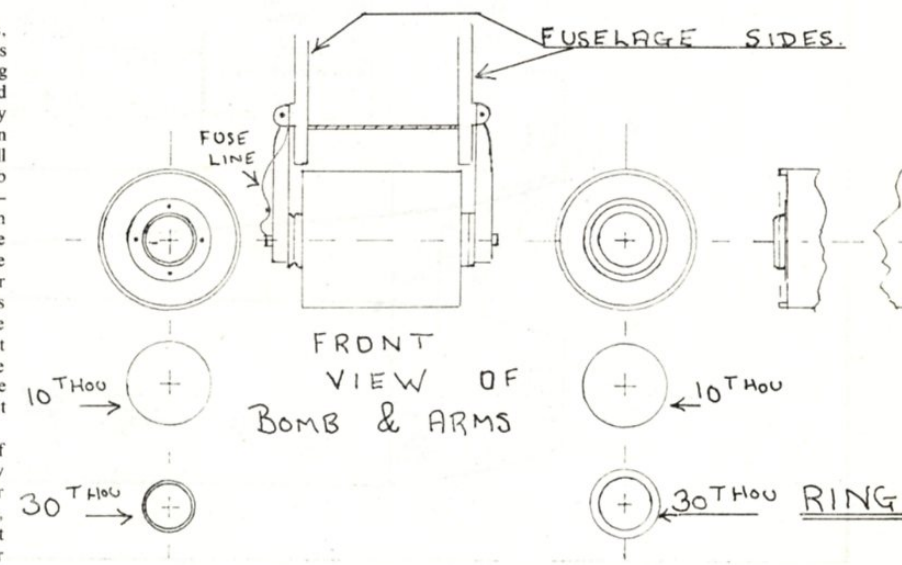
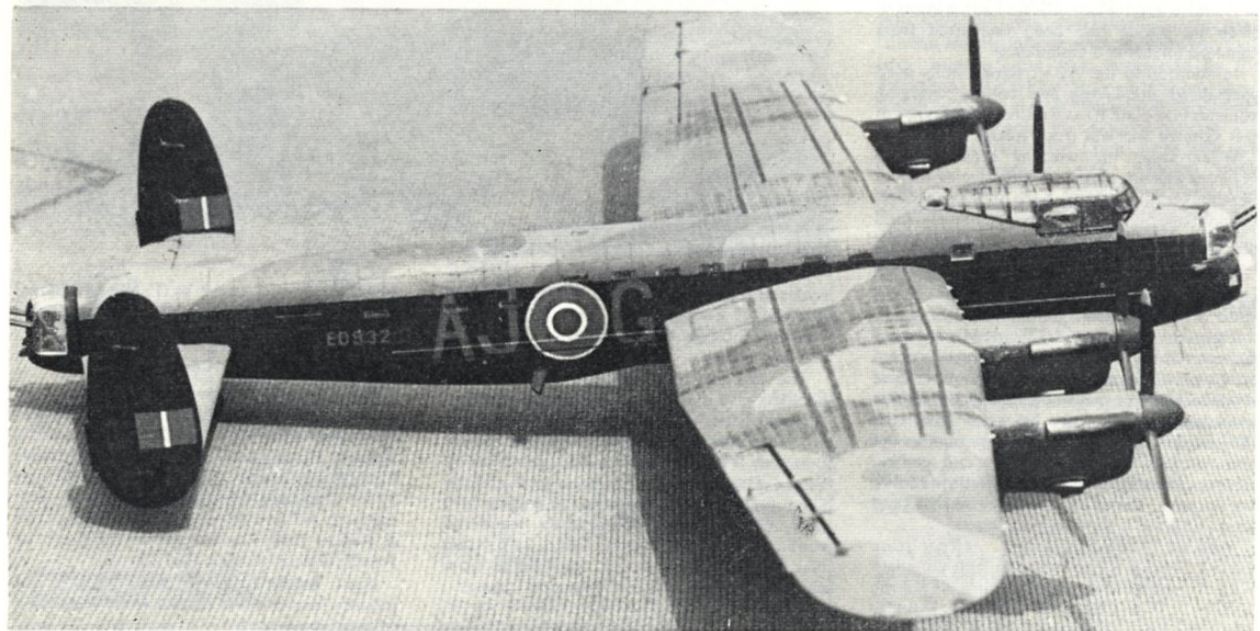
box. Now dry fit the elevators to tailplanes, to find which pair match up the best. Having sorted this out, scribe the hinge slot positions on to the rear edge of the tailplanes. Carefully notch these to take the hinges. Final shaping of the hinges can be done when the cement has hardened, as these are rather small to hold. Whilst this is taking place, scribe surface detail on to elevators and rudders. Drill small holes in elevator trim tabs to take mass balance/control horns. Balance and horns are made in one piece from plastic card, with heat stretched sprue central rods (hereafter called HSP). Rudder mass balances are made from HSP. Hold the end of a length of HSP close to a soldering iron, heated metal strip, or other heat source, until it forms a small button. Allow to cool off and build up behind this with 'Brammers Stopping'.

## Stage 3

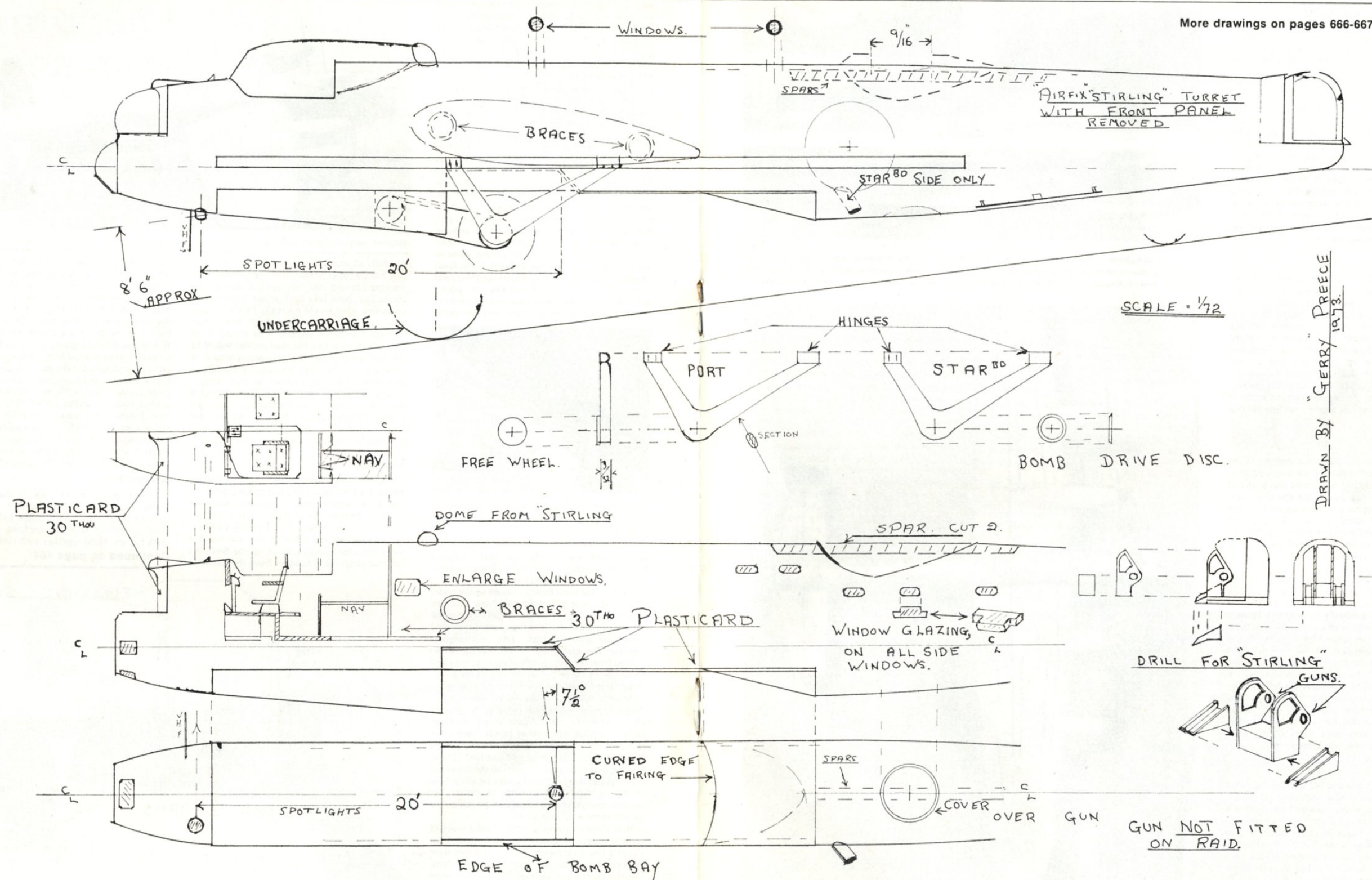
This stage brings us back to the fuselage. Cement cockpit floor assembly, and also bracing tubes into port fuselage half. Cement fuselage halves together applying cement to both halves. Hold together with rubber bands.

Continued on page 664

**Below** a view of the completed model finished in Dark Earth/Dark Green uppersurfaces and matt black undersurfaces, clearly showing the glazed windows and the fairing over the mid-upper gun turret.







DRAWN BY "GERRY" PREECE 1973



Again, watch the bomb bay area! Carefully slope the front turret seating as shown in the drawings (turret is, of course, not fitted) and fit the plastic card strip around the turret housing, also shown on drawing. Cut and shape a new blister, and cement into position. Place aside to dry. Now clean up the wing halves, with the eight inch file. Pay particular attention to the wing tips, as these are to be re-shaped after cementing. Also clean up joining surfaces of the ailerons. Drill out wing landing lights, and glaze with clear plastic sprue. Drill a small, shallow hole in the inner surface of these, and paint silver. Cement wing halves together, spreading cement evenly over the wing tip area. Again, cement both mating edges. Hold firmly with rubber bands. Cement aileron halves together, and place on one side to dry.

#### Stage 4

Engine nacelles: clean up joining surfaces; open out air intakes, as shown in the drawings, cut the 5/32 inch plastic blocks in one long strip from the cat/seed box, and cut to fit inside nacelles (the front edge is blended into the curve directly under the spinner when the cement has dried out after cementing the halves together). Clean up propellers and fit and cement propeller shafts. Cut and fit radiator grilles from plastic card. Add the two thin strips as shown. Assemble engines and put aside to dry. The undercarriage legs are not fitted at this stage.

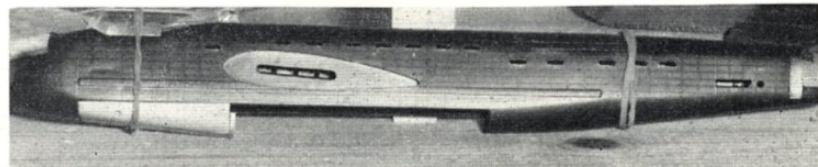
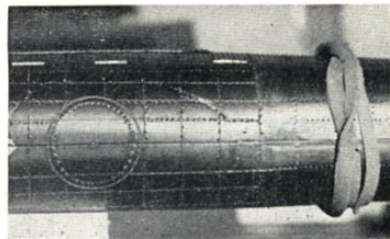
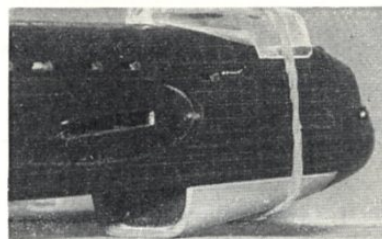
#### Stage 5

Carefully mark out the bomb arms on to the plastic cut from the side of the cat/seed box: this must be accurate! Also, note that port and starboard arms are shown on the drawings. There is a discrepancy in the wing sockets that does not show itself. In fact, I made two identical arms, and wondered why on earth they simply refused to line up! The drawing is the result of much fiddling to work this out, so please, work accurately.

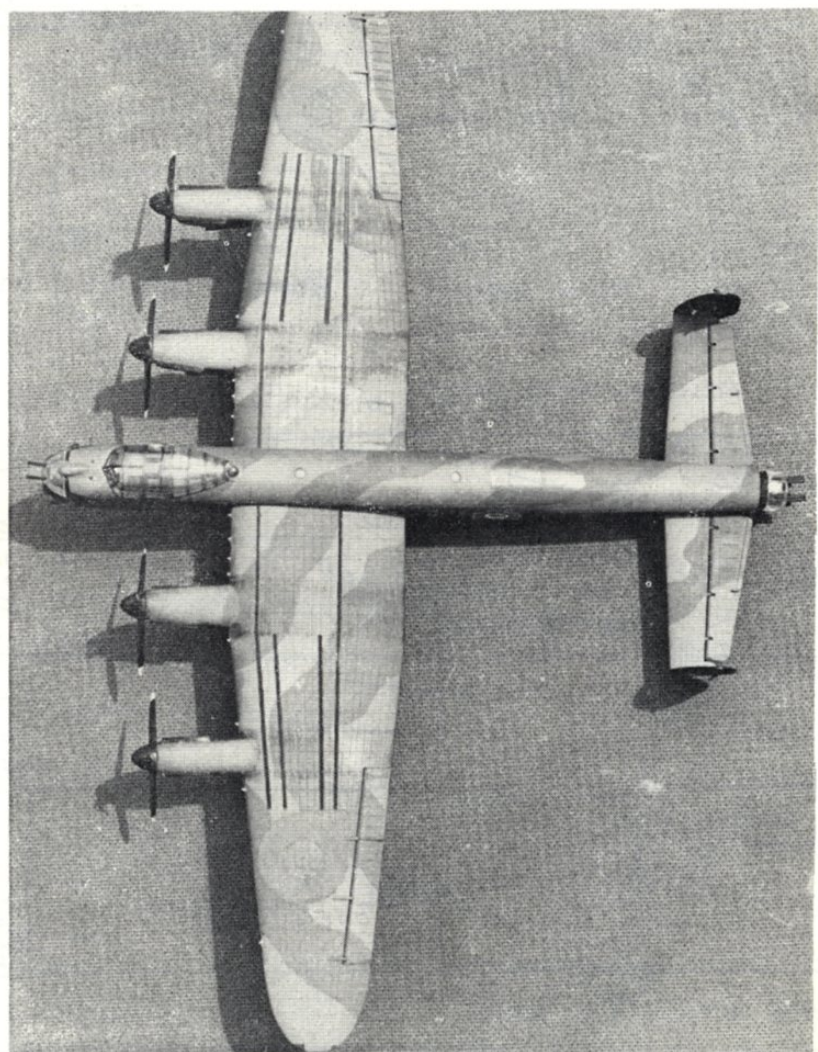
Having cut out the arms, centre-dot the position for the axle holes. Use a darning needle, and again, work accurately. Drill with a 1/64 inch bit and gradually open up to 1/16 inch. If you use a Revell bomb, cut to the length on the drawing. If you scratch build the bomb, cut and mount the end discs on the ends of a tube spacer, and build the cylinder up with 5 thou plastic card. File the hinges on the front ends of the arms only. The rear ends are left oblong, and fit into holes cut into the wings. The 'elbows' of the arms are oblong section, the arms being oval section blending into this. Carefully drill the inside faces of the front hinges and fit plastic rod locating pins.

#### Stage 6

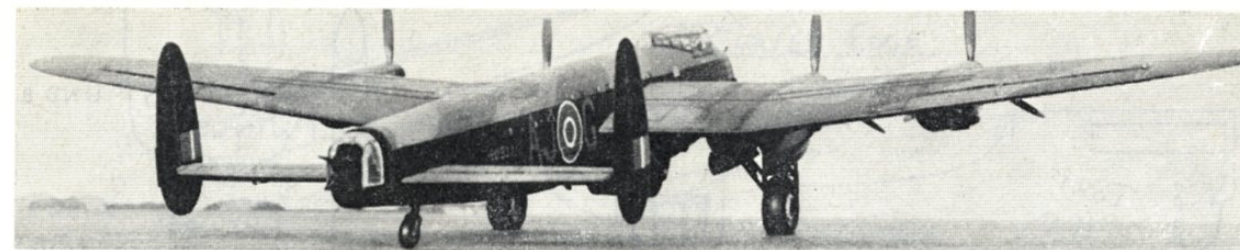
Mark out and drill and file locating holes for rear bomb arms in the underside of wings. Scribe the wing walks, location for these are shown on the drawing. Ease the wing roots into the sockets in fuselage by gentle filing. Do not cement at this stage. Open out the air intakes in leading edge, and cut and cement plastic card surround. Drill holes in leading edge for cable cutters. Re-shape wing tips as shown, and fit wing tip lights. Navigation lights are made from



Above left and above showing the front fairing dry-fitted to check accuracy. Above right hole in top of fuselage due to removal of turret fairing filled in with sections cut from bomb doors. Note hatch cover scribed in. Fuselage halves dry-fitted at this stage. Below another view of the finished model.



AIRFIX magazine



Almost a photo of the real thing! In fact another view of the model.

transparent plastic, the red in my case being cut from a smashed scooter rear light. The green is cut from a water-pistol! Re-shape the undersides of the outer engine nacelles, and cement to wings. Also cement inner engines in place. Cut and fit blisters under wings. When dry, fill all gaps with Brummers Stopping, Plastic Putty, Green Stuff or similar. Scribe detail on ailerons, and cement into place in wings.

#### Stage 7

Carefully remove the front panel from a Stirling rear turret. Cut the inner side panels: cutting the windows out first simplifies this job, also drill to take the gun pivots. Warning! I have shown the block that fits between these a shade too big on the side view, height is shown correct in front elevation. Cut and fit cartridge case chutes. This turret is cemented into place as final assembly. Cut the flange off the front turret back. Fit into fuselage nose, but do not cement. Check fit in modified mounting. Drill and cut out front gun mounting, the side pieces, fit Stirling guns, paint, and cement into turret. Cut and fit 5 thou plastic card 'arch' and the 'arms'. These arms are twisted slightly as shown. Paint black before cementing into place. Turret is not fitted at this stage.

Mark out and drill camera aperture under nose, the oblong window, and the two windows on fuselage top centre line. The spotlight was fitted into the camera aperture. Dry fit wings, dry fit bomb arms, hold bomb in place and check all is OK, then mark off position for locating pin holes in the fuselage longeron. Remove wings etc, and drill these holes, then

re-check! Do not cement at this stage. Cut and fit plastic card floor in bomb bay. The rear section of this is cemented on to edges of bomb bay as shown in drawing.

I made the spots by drilling the thick sprue found in this kit, the lens being a short length of clear sprue pushed into this after painting the sides black. Do not use cement on this job.

The rear fairing is built from thick plastic laminations, shaped, sanded, then cemented into place. Drill location holes for dipole aerial, trailing aerial and also drill hole in nose for VHF aerial. Use a nylon bristle for this, it lasts longer.

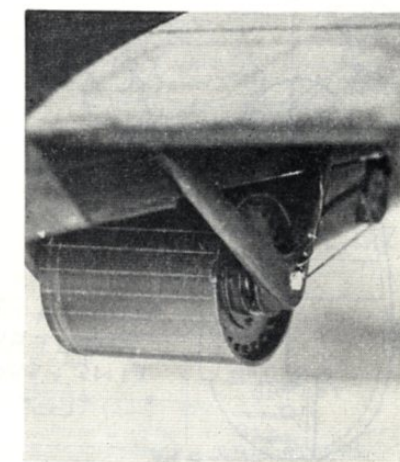
Scribe the covers over the mid-upper gun position, and the Vickers gun position under the fuselage. These guns were not fitted, as the flight out to the target and back was carried out right down on the deck.

At this stage I painted the fuselage and hand painted the roundels and letters. The serial number was taken from the Revell transfer sheet. Please note: the /G on these aircraft was overpainted, but still showed through the black paint.

#### Stage 8

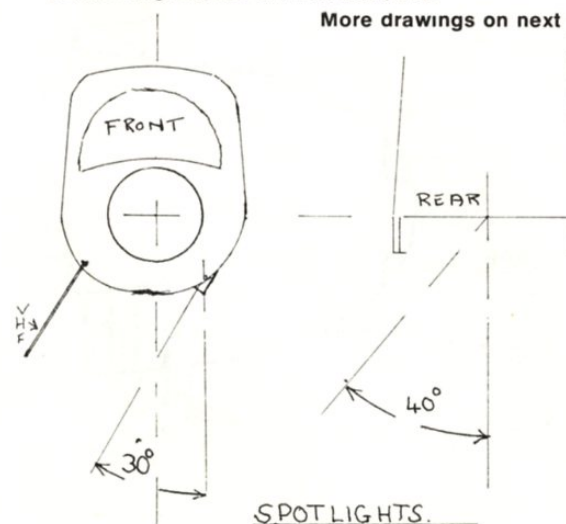
Cement nose fairing into fuselage, cement main wings and tailplanes. Carry out modifications to undercarriage as shown in the January '73 Airfix Magazine by Phil Williams. Use the wheels from the Airfix Halifax kit. 'Bulge' these as shown in drawings, or just file a flat. Fit the bomb arms and the bomb, clean up the tail wheel and cement into place (supporting the model upside down) and

cement fins and rudders. Leave to really dry out. When dry stand model on its undercart, and fit cable cutters, made from HSP. Cut and fit the control hoods for the ailerons, the trim tab horns are made from plastic card and HSP. Cut away the astrodome on the cockpit cover, and fit the Stirling astrodome. Paint cover and cement into place. Fit windscreen washers, make and fit ailerons, and firmly cement turrets into place.



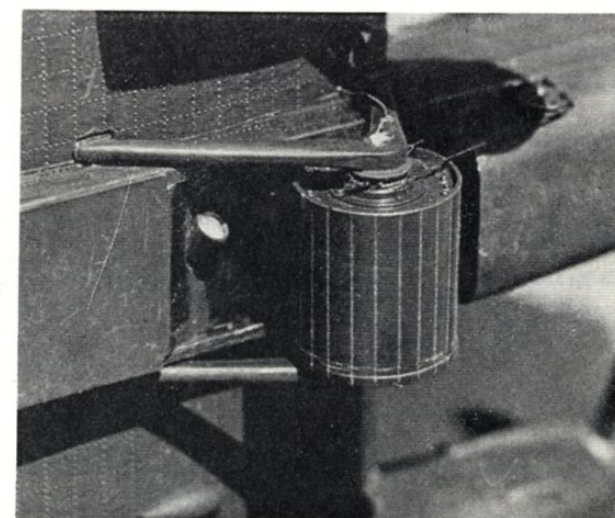
Above and below showing bomb and mounting arms, bomb drive wheel and spotlights.

More drawings on next page

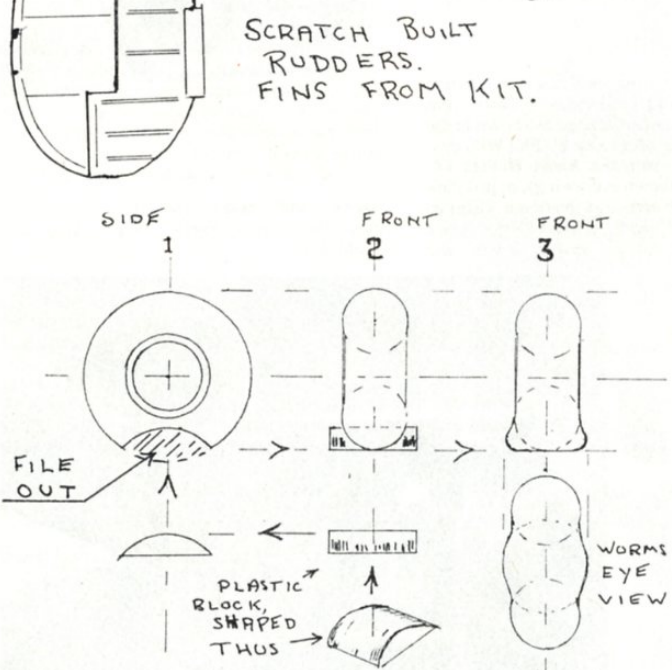
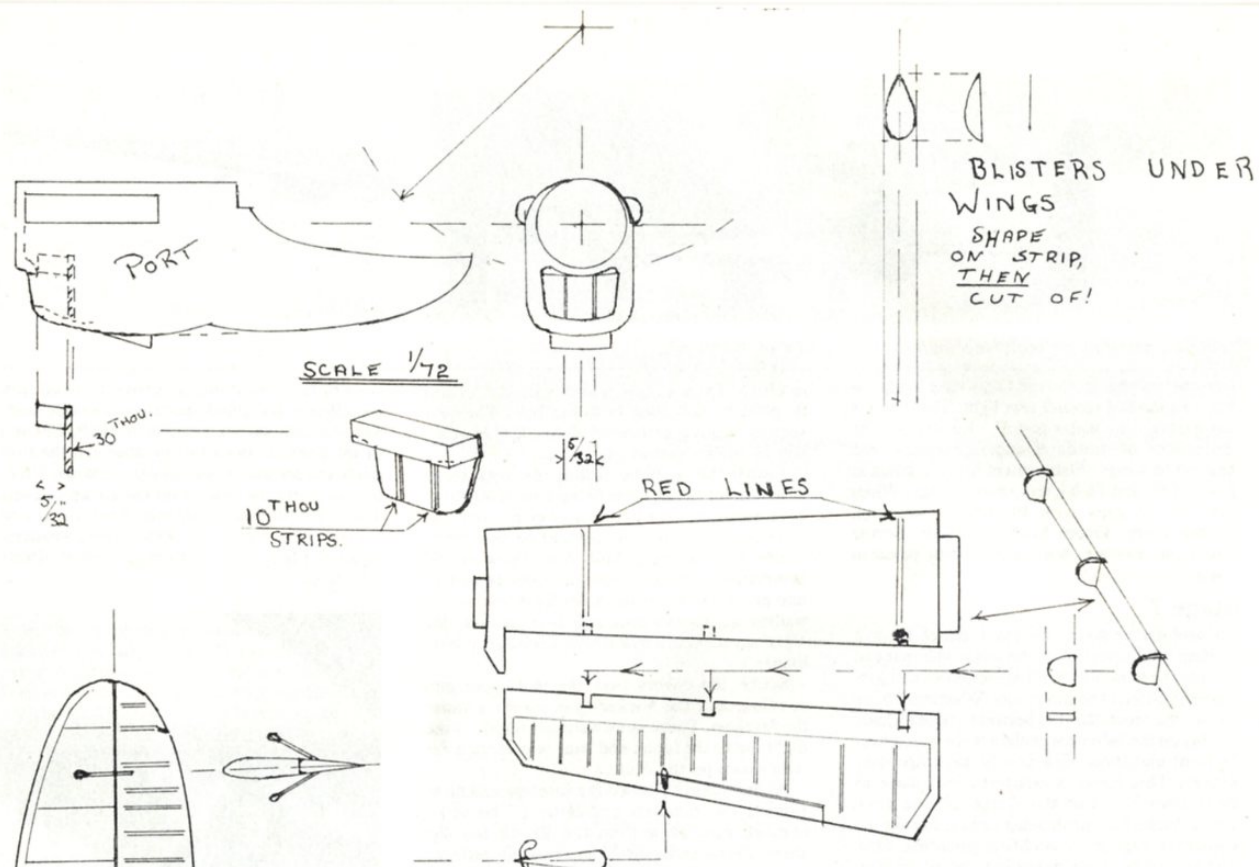


August 1973

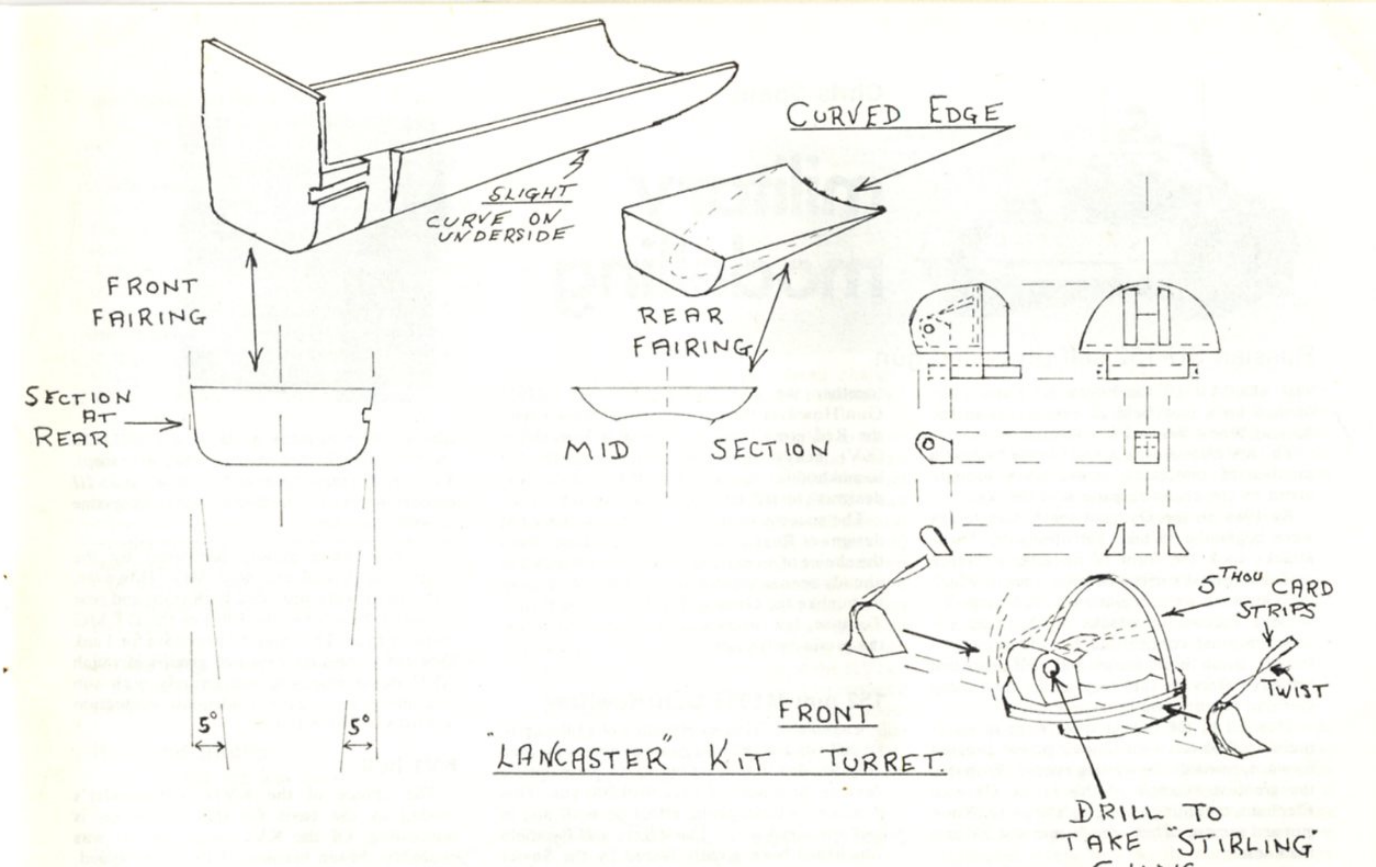
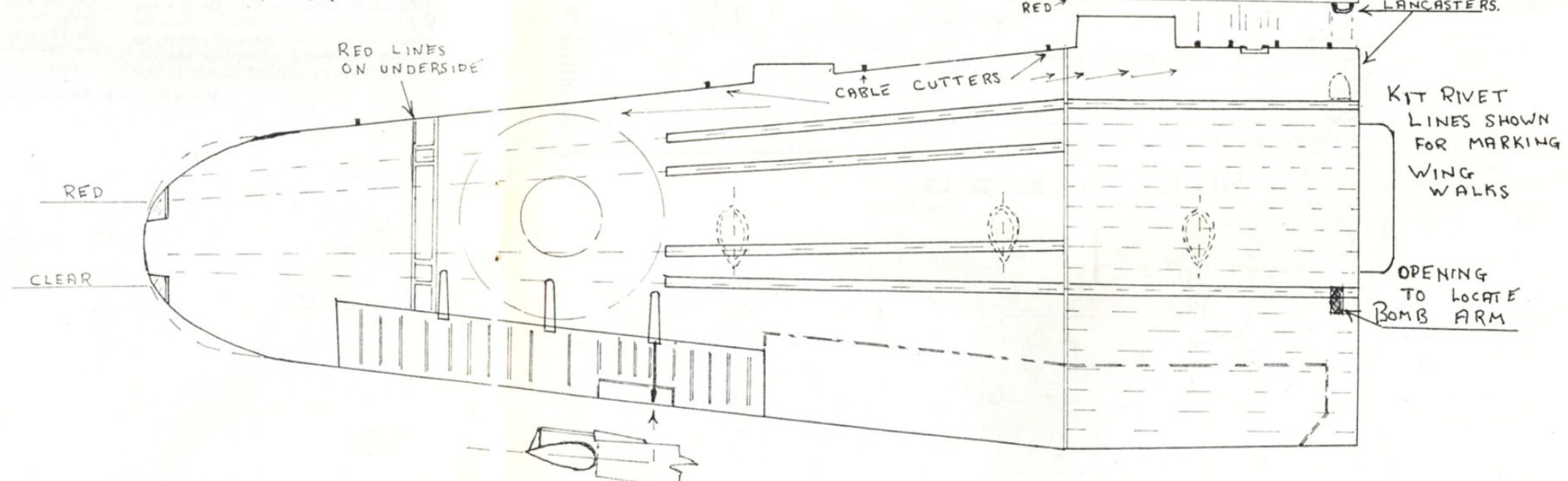
SPOTLIGHTS.







CUT HINGE SLOTS IN ELEVATORS, THEN DRY FIT TO TAILPLANES, AND MARK OF TO NOTCH FOR HINGES



1/72 SCALE.  
"GERRY" PREECE. I.P.M.S.  
1973.





Chris Spain

# military modelling

## Russian SU-152 self-propelled gun

THE RELEASE OF the Fujimi KV1 and 2 has opened up a new field of conversion to the Second World War AFV collector.

The KV chassis was in real life the basis of a number of interesting conversions brought about by the changing pattern of the war.

By 1943 on the Ostfront the Soviet forces were beginning to take the offensive. These attacks took the form of massive set piece assaults against various defence lines to which the Germans were beginning to fall back. To achieve success in attacks of this kind the attacker must concentrate heavily armoured thrusts using both tanks and self-propelled artillery. Only in this way could the strong German defences be breached.

This led to the use of what were in effect mobile pill boxes, with all their power directed forward, towards the waiting enemy. Probably the greatest example of this is the German Elephant, mounting a huge high velocity 88 mm gun and armour of between 50 mm and 200 mm thickness.

However, by this time it was the Russians' turn to produce the heavy assault guns. At the beginning of 1943, a team of talented designers in the Soviet tank factories decided to bring

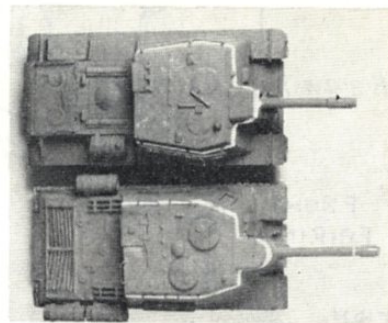
together the well proven 152 mm M1937 Gun/Howitzer then in widespread service with the Red army, and the Klimenty Voroshilov (KV) heavy tank. In just a month the Samakhodna Ustanovka (SU) 152 was designed, tested, and entered mass production.

The success of the SU 152 and subsequent designs of Russian assault guns stemmed from the choice of an existing tank chassis which had already been in service for a number of years so that unlike the German Elephant or the British Tortoise, few snags were encountered during the production stage.

## 152 mm M1937 Gun/Howitzer

Capable of firing an HE shell of 95 lbs up to 19,000 yds the 152 mm gun was generally used only for direct fire, owing to its poor optical devices, at ranges of only 9-10,000 yds. This produced a devastating effect on both dug in and armoured units. The Tigers and Panthers which had been greatly feared by the Soviet soldiers up until this time could now be destroyed at long range by his armoured units during the initial attack.

In the same way as the Elephant the SU 152

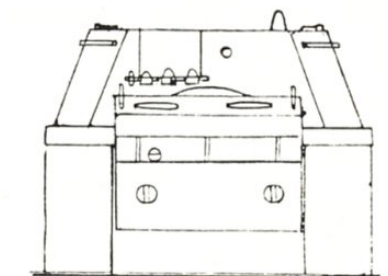
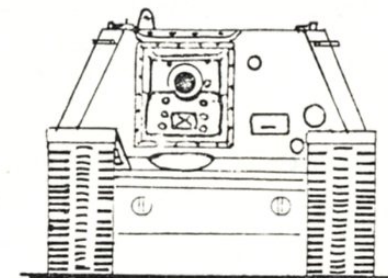


Above for comparison, a model JSU-152 (bottom) with the SU-152 described here (top). The JSU-152 model is based on the Airfix JS III chassis and was described in Airfix Magazine several years ago.

must have been greatly hampered by the absence of a ball mounted MG. However, pistol ports were provided both front and rear through which either the PPsh or the DT MG could be fired. This, and the provision for Tank Descent — specially trained groups of tough AFV riding troops armed entirely with sub machine-guns — gave it adequate protection against German infantry.

## KV1 hull

The choice of the KV1s (commander's model) as the basis for the conversion is interesting. Of the KV1 range the (s) was probably chosen because of its higher speed, lighter weight and better mechanical reliability. This meant that when the extra weight of the gun and gun compartment was added, a speed and reliability on par with the other KV's was



AIRFIX magazine

still obtained. Also the advent of the JS 1 and II in late 1943 led to the gradual phasing out of all KV types.

The fighting compartment was, in typical Soviet fashion, crude but effective. It comprised a sloping sided armoured box which overhung the KV trackguards to give a large roomy working space for the crew of six. Although the ammunition was bulky it was able to accommodate 28 rounds both of HE and AP capability. The two circular hatches in the roof had an unusual torsion bar arrangement to aid in opening them as did the large exit/entry door which opened into both the rear and the roof of the compartment. On later models a DT 1943 anti-aircraft gun could be mounted on the roof and fired by a crew member from one of the open hatches.

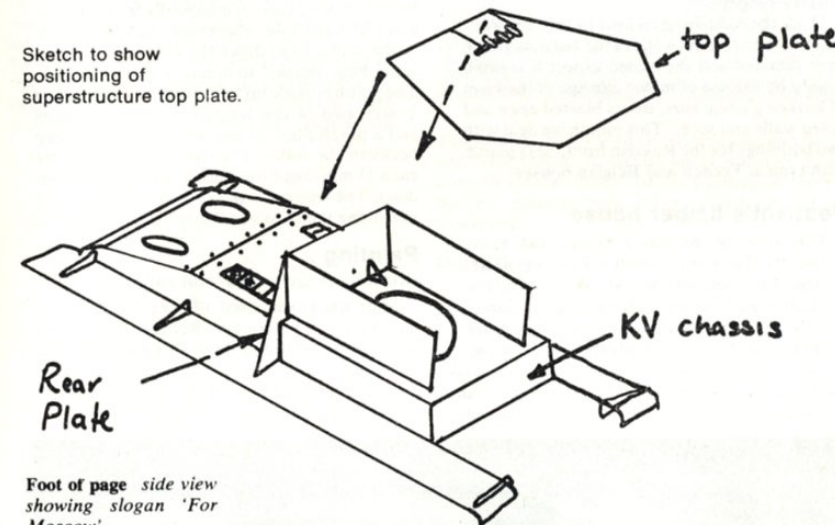
The huge cast mantlet is very complex and mainly covers the recoil cylinders and the gun traversing mechanism. At the place where the mantlet surround joins the hull a weak point was produced which would have been a shot trap, so a large D shaped steel plate was welded onto the glacis plate to deflect shells away from this area.

## Modelling the SU 152 in 1:76 scale

Kits needed: one Fujimi KV2 and one Airfix JS III.

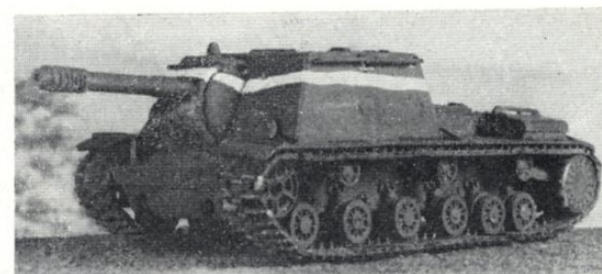
## Hull and tracks

As the SU 152 was based on the KV1s



August 1973

This three-quarter view clearly shows the massive bulk of this interesting vehicle which makes a good addition to any AFV collection or wargames army. The crudity of the white line around the fighting compartment is deliberate.



commander's model various detail changes must first be incorporated on the Fujimi KV2 chassis.

The rear hull sides must be angled to allow more slope on the rear deck. This also means having the square cut rear end unlike the semi circular one on the normal KV1 and 2. This can be done quite simply by placing the hull sides on the drawing, then chamfering at the required angle. The hull top must then be sawn into two pieces along the natural line moulded into the model. An Exacto saw is the best tool for this as, if it is done carefully, the rivets will not be damaged. Now two pieces of 30 thou card are used to give the angled rear end of the KV1s.

The existing Fujimi wheels must be replaced with those from the Airfix JS III as after about 1942 the resilient rubber type which Fujimi supply, had been replaced, partially because of the shortage of rubber, by the Airfix cast steel

type. The Airfix wheels have centre holes which are slightly too small, but I found that by drilling out the rear (inner wheels) to the required size and only countersinking the front (outer) wheel the wheel pairs were the correct distance from the body to allow the track guides to pass between them.

Unlike the T34, photographic evidence would suggest that the two wheel types were never mixed.

The main fault with the whole of the Fujimi range and especially the KV1 and 2, is the track, which is very thick, very tight and unlike the Airfix track, cannot be successfully bonded. For this reason I used the Airfix JS III track, and although it is slightly narrower this is not noticeable in 1:76 scale.

Unlike the KV's, the SU 152's mudguards cannot be glued on last as they form an integral part of the gun casement. In the case of Airfix JS III track this does not matter. However if you do decide to use the Fujimi track the best thing is to remove the teeth from the rear drive sprocket where they would normally engage the track. If it is done carefully this does not show. However, it makes fitting the track far less annoying. The return rollers should be glued in place after the track is fitted, in this way they are less likely to break off.

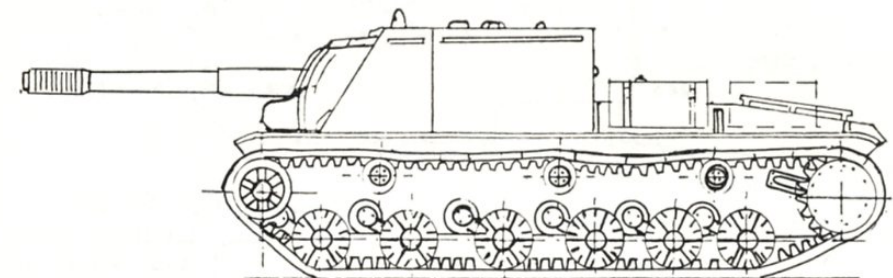
## Fighting compartment

Using the Fujimi KV2 as a basis is better than the KV1 as part of the mantlet and gun can be used.

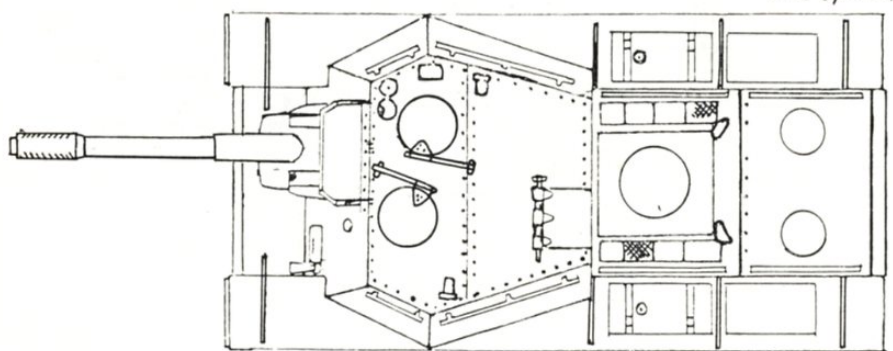
The splash guard around the front of the hull MG must be cut off carefully with a knife as this interferes with the seating of the front plate of the gun compartment. A small square of 40 thou card is, following the drawing, smoothed in a shovel blade shape with tapered edges. This is then glued down to represent the shot deflector. This need not be too well finished as the real deflector tended to be very crudely made.

The four main compartment sides are cut from 20 thou plastic card, using the drawing as a guide. Both the top and rear can be traced directly from the drawing as their true shape is shown. The front plate is from 30 thou card, as this will have the mantlet etc glued to it, it needs to be stronger.

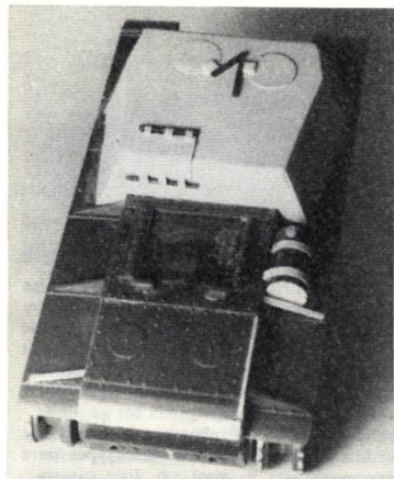
One quick way to correctly align the hull sides is to first fix in place the rear plate. This is positioned over the moulded line on the hull top, and is at 90° to the hull top so can be set upright by small right angle brackets of 20 thou card. When this is in place measure the height of the compartment top from the hull top and cut out two pieces of 20 thou card this size. Glue them onto the hull top as in the sketch and they will support the roof, which when glued to the rear plate will be in its correct position. The sides and front can be glued into place without



SU.152. 1:76 Chris Spain







The fighting compartment in place before painting. Note auxiliary fuel tank from Airfix T-34 with microstrip straps. Slope of engine deck altered. Hinge bars on hatches from plastic rod or stretched sprue.

any fear of their not being symmetrical. When the compartment has been assembled after smoothing down the joins to give a welded look the hatches may be glued in place. The two circular hatches are from 8 mm dia 10 thou card, the torsion bars coming either from plastic rod or stretched sprue. The large double door at the rear is 20 thou card and the hinges are made in the same way. The two vision blocks and the periscope were carefully cut from the KV2 turret top and positioned using the drawing as a guide.

The mantlet presents some problems but being so easily recognisable on these assault guns it is worth going to the trouble of reproducing it accurately. I built mine up with Humbrol Body Putty, layer by layer, and sanded it to the correct shape. The small inspection plate on the end was added from plastic card.

For the gun barrel itself I used the barrel supplied with the KV2 as this is of the correct pattern. The curious muzzle brake is a multi-finned type which was popular with the Russians and to a lesser extent the Germans towards the end of the war. A thick piece of circular cross-section sprue was used, after first having the gas grooves sawn in using an Exacto razor saw.

## Painting

Soviet vehicles tend to be boring in their colour schemes, mainly mid to dark green or white with few or no markings. There tend to be more photographs of the later JSU 152 (the subject of an *Airfix Magazine* article in October 1969) which is based on the JS I and II and many of these show markings. I am afraid it was a case of having an unmarked model or making the marking up so I chose a typical rather than actual marking: a crudely painted white strip around the top of the vehicle and a patriotic slogan on one side. □



## Russian Front houses by Terence Wise

ONE OF THE most notable facts which emerges from a study of the buildings in front line Second World War photographs is that they are either almost intact, presumably because little or no fighting took place in that area, or they are almost completely flattened. In the latter case usually only fragments of the walls, two or three feet high, survive and all else is just a shambles of bricks or stone, tiles and broken timbers.

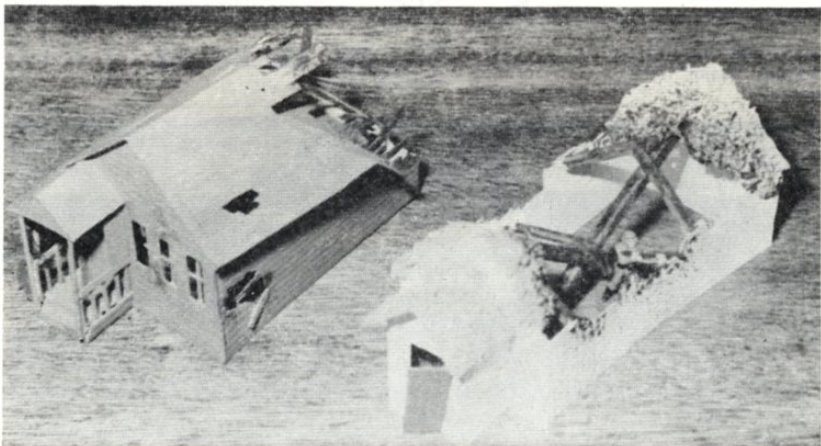
Such badly damaged buildings are of little practical value to a wargamer because guns and vehicles can find no real cover while figures can no longer be placed within the building outline because of the debris. Therefore in constructing wargaming buildings for the Second World War period we need to reach a compromise between the complete ruin and the hardly touched building in much the same way that terrain is stylised or a mean taken for artillery ranges.

In all the models described in this and next month's articles, the walls of the buildings have been retained and the ruined aspect is created largely by the use of minor damage in the form of broken glazing bars, doors blasted open and holed walls and roofs. This month we deal with two buildings for the Russian front, next month with typical French and Belgian houses.

## Peasant's timber house

This type of peasant's home, and many variations of it, was common in Russian villages during the Second World War. Wartime pictures usually show such buildings in flames and the model is in fact based on a village home burnt during the German advance on Moscow.

Front views of the two buildings, with the thatched cottage at right. Placed in a suitable terrain, buildings such as these lend considerable extra realism to any wargame.



# buildings for wargames

In the model I have attempted to show battle damage by bullet and shell holes, and by a partially collapsed roof which at the same time provides a convenient place for an anti-tank gun or a machine-gun to lurk.

## Assembly

Use plank embossed plastic card throughout. Cut two side walls, each 70 x 34 mm. Mark with bullet and shell holes and remove some of the upper planks, down to about 10 mm, from what will be the ends at the rear of the house. The photographs illustrate the effect required. Cut a 45 x 16 mm rear wall and remove the top planks at each end so that when joined to the side walls the three parts match for height. Cut the front wall as Fig 1. (Note that the floor of the house is above ground level). Add plank door and glazing bars. Assemble the four sides. Cut two 74 x 33 mm roof sections and once more remove planks haphazardly from the rear end and make holes elsewhere. Attach the roof to the walls, bend down the rear edge and add some long 'planks' to create a shattered look. The porch is made up from two side walls as Fig 2, with two 14 mm lengths of match for steps and a porch floor 14 mm wide by 12 mm deep between the walls. The two roof sections are each 13 mm long from peak to eaves and 15 mm deep. The triangular panel over the steps is 15 mm along the base and 9 mm high at the apex.

## Painting

(References are to Humbrol paints.)

Matt Khaki was used all over, brushed to a streaky finish before dry. Because the interior walls are visible they were also painted, using

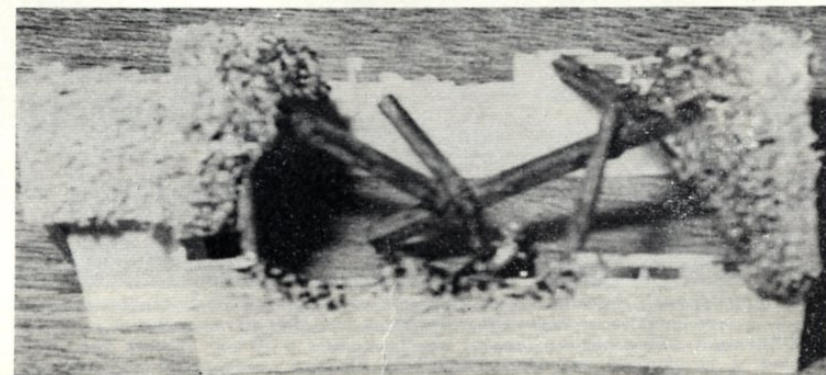
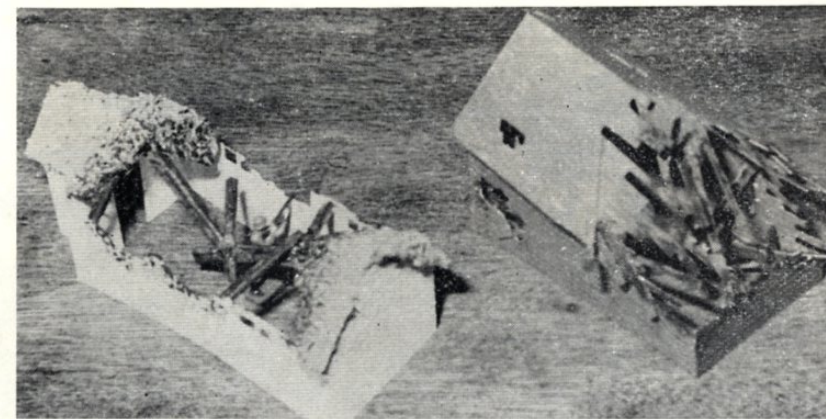
the same colour. Matt black was applied to plank ends and the broken down rear walls to create a charred effect. I found the best method was to remove most of the paint from the brush on a piece of newspaper, then apply the almost dry brush to the appropriate areas.

## Peasant's stone cottage

This model is based on a dozen or so thatched cottages which formed a village in the Kharkov area. All the cottages were basically the same, some having a lean-to added on one wall. These buildings were of a very primitive type and because of this simplicity the model, with its thatched roof and whitewashed walls, could also be used for the Napoleonic period. No damage was visible in the original but I have modelled the building with a ruined roof and damaged walls to allow riflemen to be placed in the interior. Chimneys were not visible on this building, nor indeed on the previous one.

## Assembly

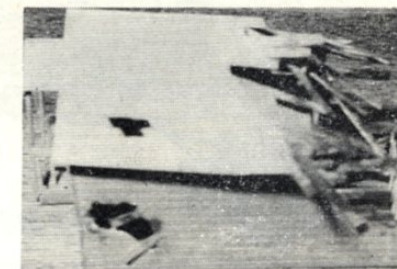
Use random stone embossed plastic card for all walls. Cut two side walls as Fig 3. (The cut-outs are the windows, which have their tops at eaves level). Cut two end walls as shown by the continuous lines in Fig 4, only one having the 10 x 20 mm doorway. Assemble the four walls after cutting any holes or other damage. Add porch walls 5 mm out from each side of the doorway, the walls being 15 mm deep by 25 mm high. Add a porch front, as shown by the dotted line on Fig 4, and two roof sections, each 18 mm square. Attach a 10 x 25 mm damaged plank door to the porch front. Square sprue was used for the rafters, only a few pieces being used so that the interior was left as open as possible for figures. Scraps of plastic card were then cemented at the ends of the roof, coated with



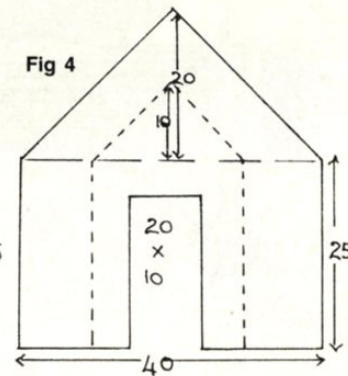
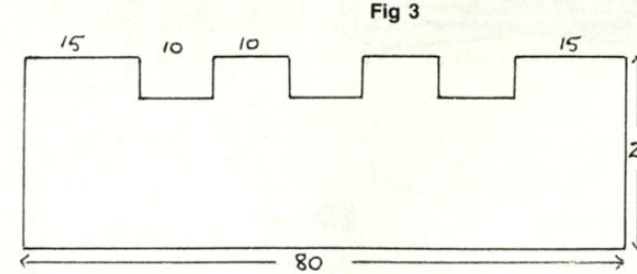
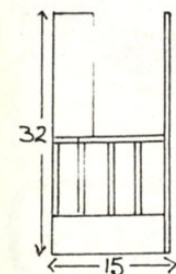
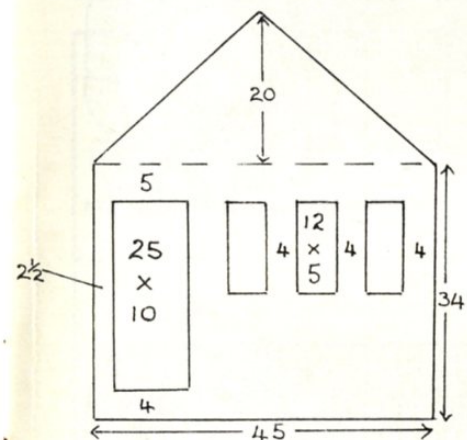
glue and sprinkled with dessicated coconut to represent thatch. A varnish spray was used to consolidate the 'thatch' before painting. A few broken glazing bars were added to the windows.

## Painting

Matt white for all walls, in and out. HP1 German Sand for the thatch. Matt Khaki for timber parts. Matt Black applied as before to represent charring to the beams and the edges of the surviving thatch. □



Top of page rear views of the two buildings with the thatched cottage on left. Above close-up of the thatched cottage showing 'burnt' beams, dessicated coconut 'thatch' and a figure in position to show the scale. Above right close-up of the timber house clearly showing the smashed roof. Both buildings will shelter vehicles as well as figures.







## Bruce Robertson fighting colours 1914-1937

Part 14: early Gloster fighters — Grebe and Gamecock



Above: the Mars I Bamel, forerunner of the Gloster fighters and shown last month, is here seen in another of its attractive finishes, light blue fuselage and ivory wings and tail surfaces (via Ray Punnett). Below: a Grebe II of 32 Sqn (top): J7399, J7571 and J7599 also representative squadron aircraft; and Grebe II two-seater of 56 Sqn. J7408-7416 single-seat Grebe IIs were squadron initial equipment.

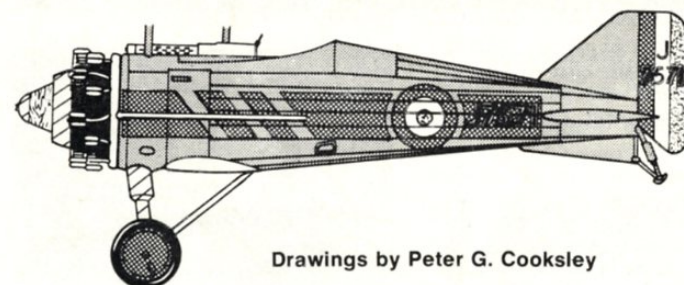
TO REPLACE THE wartime Snipes in fighter squadrons a total of 129 Gloucester Grebes were ordered after the company had experimented with several prototype fighter types. Entering service in 1924 they were subject to the general finishes, flight and serial marking decrees detailed in Part 13. Two years later, on November 11 1926, the firm changed their name from Gloucestershire Aircraft to Gloster Aircraft and so the aircraft became the Gloster Grebe.

### Grebe

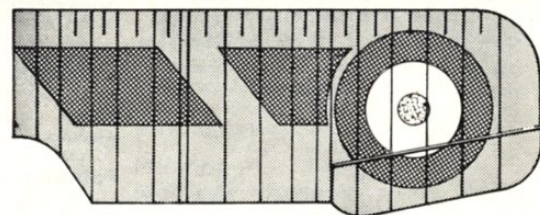
The first Grebe made its debut at the annual Royal Air Force Pageant at Hendon in 1923. That year a new feature, that engendered a new marking, was introduced at the display, a New Types Park. A whole range of new aircraft types was being considered by the Air Ministry for the RAF and the attendance of these prototypes were to become a feature of this annual RAF display.

Fourteen new aircraft were displayed in the 1923 Pageant's New Types Park enclosure. Each bore a number, 1 to 14, marked in black boldly on silvery aluminium-doped finishes. These were referred to by their numbers in the programme, sold in aid of Service charities, and were referred to by the commentator in a 'fly-past of new types' which became an important event in the display each year. No 14 on the 1923 occasion was the prototype Grebe J6969.

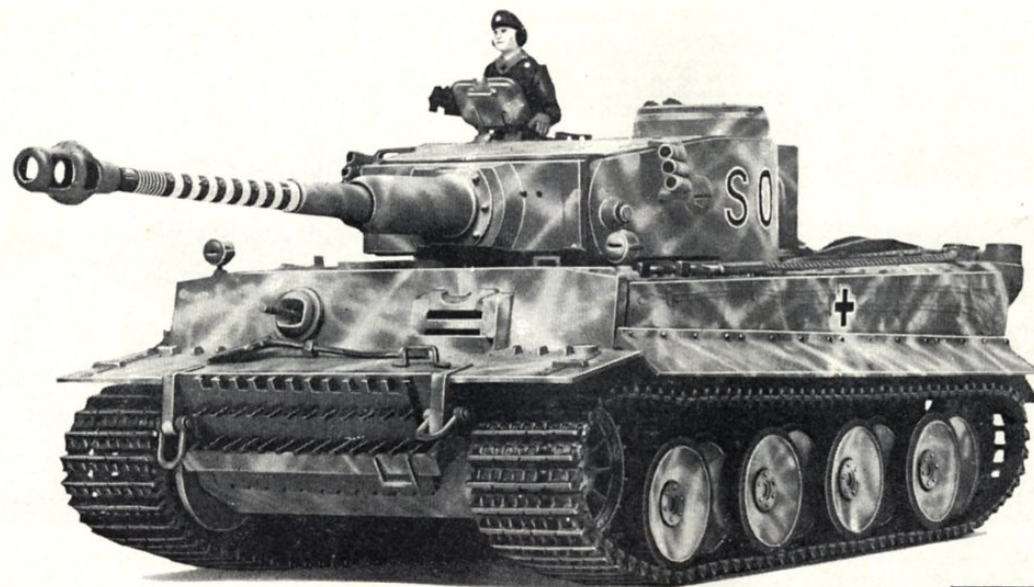
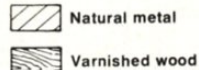
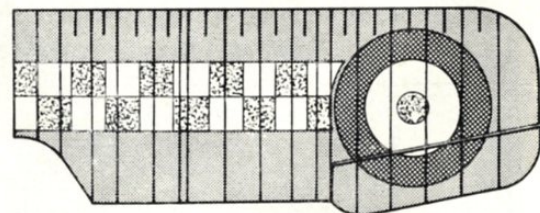
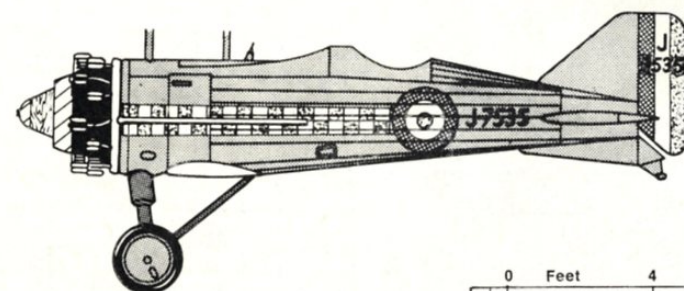
Text continued on page 676



Drawings by Peter G. Cooksley



More drawings on page 674



## COMPLETE DETAIL FOR PERFECTIONISTS



TAMIYA models give you all you are looking for if you require fine detail, accuracy and parts that fit. These 1/35 scale kits may be finished to the standard of collectors' items. Here are just a few of the fantastic range of W.W.II fighting vehicles. Above is the famous Tiger 1. 1,348 were built and extensively used 1942/3. The kit is motorised with 1 crew member, plastic track and full decals. Finest detail for £2.50. This model, the Panther, Jagdpanther, Leopard and other Tigers are available in a 2-motor remote control form, price £3.30. These are manually-operated by hand controller with forward and reverse. The control has two levers, each controlling a different motor in a double gearbox. This means that tanks are also steerable exactly as the originals.

 <p><b>PANZERKAMPFWAGON II.</b> Spearhead of the 'Blitzkrieg'. Had 20 mm and 7.92 mm machine guns and a max speed of 40 kph. Kit: motorised, 1 crew fig, plastic track, full decals. May be built as Aust. F or G. £1.55</p>	 <p><b>GERMAN PzKw III.</b> The III and IV were the principal tanks used in W.W.II by Germany. Many versions were identified by letters A to N. Kit: Unmotorised, Officer with arms and equip. Plastic track, full decals. To build as Aust. M or N. £1.99</p>	 <p><b>STURMGESCHÜTZ III.</b> German 75 mm assault gun. The most widely used of its type. Kit: Unmotorised, 4 para's + arms and equip. 1 crew fig. 75 mm or 155 mm gun. Fine detail incl. skirts. Plastic track, decals. £1.99</p>
 <p><b>PANTHER.</b> First German with a sloping Glacis plate. One of the finest designs of W.W.II. Had great speed, mobility, and 75 mm gun. Kit: Motorised, 1 crew fig. Plastic track, good detail and decals. £2.50</p>	 <p><b>LEOPARD.</b> First all-German tank since W.W.II. Standard N.A.T.O. 105 mm gun. Can wade streams 13' deep and fire while staying submerged. Kit: Motorised, plastic track, 1 crew fig. Decals etc. Magnificent detail. £2.50</p>	 <p><b>JAGDPANTHER</b> on standard tank chassis power-fully gunned (88 mm Pak 43/3L/71) tank destroyer. Almost invulnerable to frontal attack, could destroy any allied tank. Kit: Motorised, 1 crew fig. Plastic track, good detail and decals. £2.50</p>

### SEND NOW FOR THIS BEAUTIFULLY ILLUSTRATED COLOUR CATALOGUE!

Recently arrived from Japan. Tamiya's magnificent 30-page colour catalogue, fully illustrated and showing the complete range of over 150 kits available from this famous manufacturer. Yours for only 20p including postage. (U.K. only).

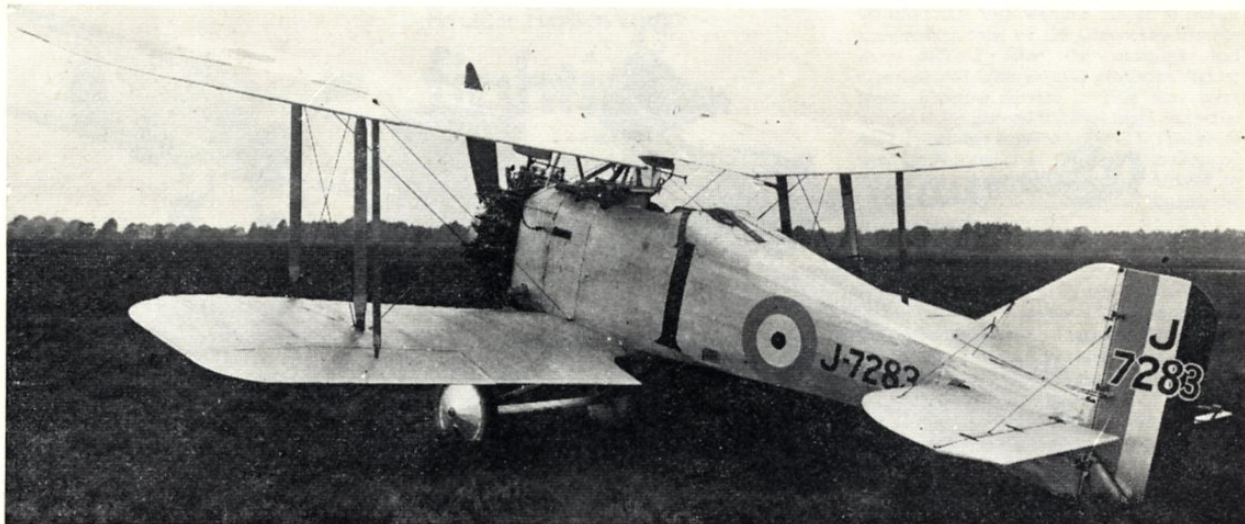


\*Prices shown here are suggested selling prices only and include V.A.T.

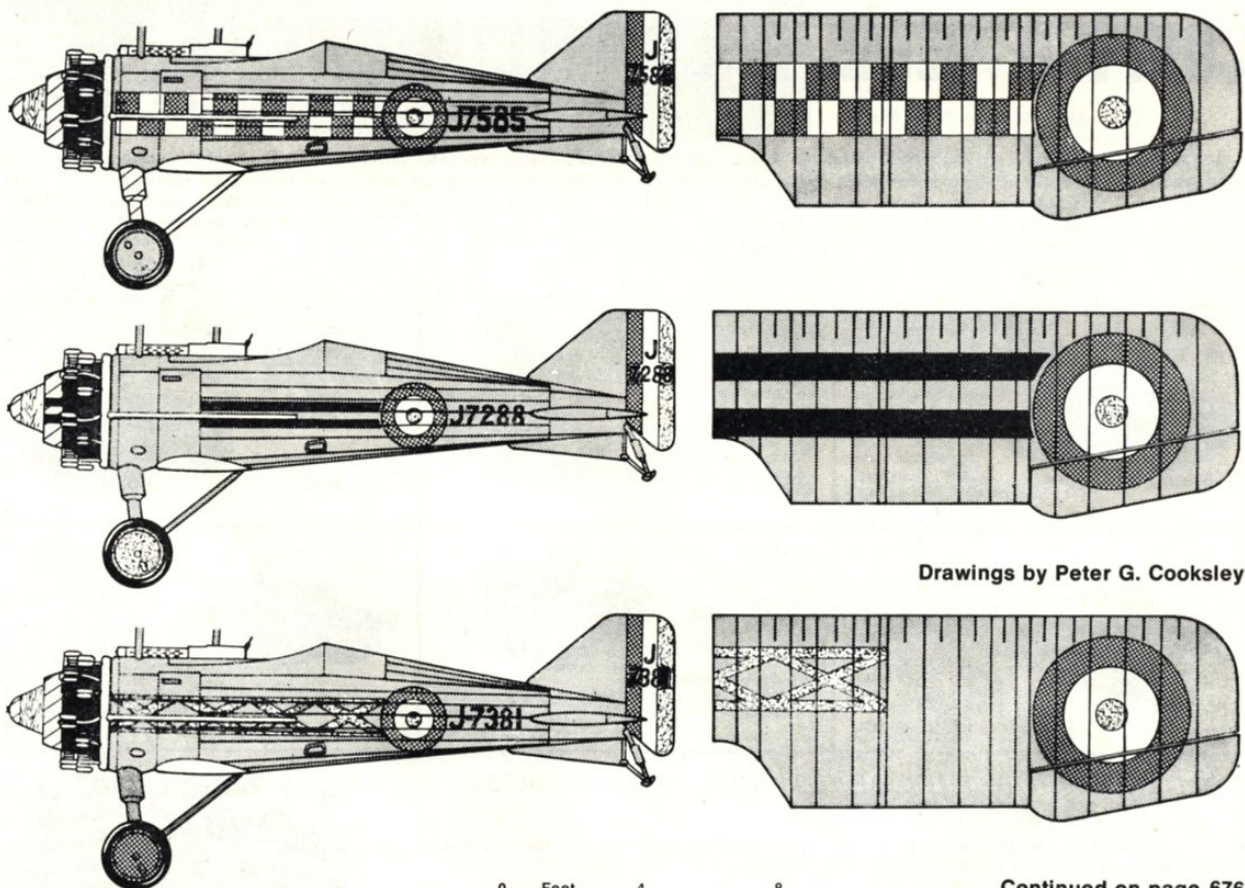
**RICHARD KOHNSTAM LTD**  
13-15A HIGH ST, HEMEL HEMPSTEAD, HERTS







Above the first production Grebe seen on September 11 1924, still bearing its RAF Pageant New Types Park No 1. Below top Grebe II of 19 Sqn: J7417 and J7576 also representative squadron aircraft. Below centre Grebe II of 25 Sqn: J7283-7294 were squadron initial equipment. Bottom Grebe II of 29 Sqn: J7385 and J7390 also representative squadron aircraft.



Drawings by Peter G. Cooksley

Red  
White

Blue  
Olive green

Black  
Aluminium dope

Natural metal  
Varnished wood

Continued on page 676

## BOOK NEWS

IAN ALLAN

Terminal House Shepperton  
TW17 8AS

# The Confederates and Federals at War

Col H.C.B. Rogers

Many books have been written about the American Civil War, including general histories, descriptions of particular campaigns, biographies of the principal commanders, and memoirs by participants of all ranks. Few of these books, however, give the reader very much idea as to how the opposing armies really worked. The information contained in these pages will be of great assistance to the many enthusiastic students of this most bloody yet fascinating of wars; whether they pursue their studies by reading or seek through war games to re-examine actions and decisions taken at the time.

9" x 6" 184pp (plus 32pp illustrations)  
Published 21st May

£3.20

# Pictorial History of Swords and Bayonets

R. J. Wilkinson-Latham

The evolution of swords and bayonets, including dirks and daggers, from the Bronze Age to 1918. Many types of swords, whether infantry, cavalry or naval, are discussed; native and non-military swords and daggers are included and the main types and styles described.

9" x 6" 96pp (plus 128 illustrations)

£3.50

# British Artillery 1914 Weapons and 1918 Ammunition

I. V. Hogg and L. F. Thurston

A detailed description of all the known types of artillery equipment in British service at the outbreak of World War I, with all new developments that were rushed to the fronts during the war.

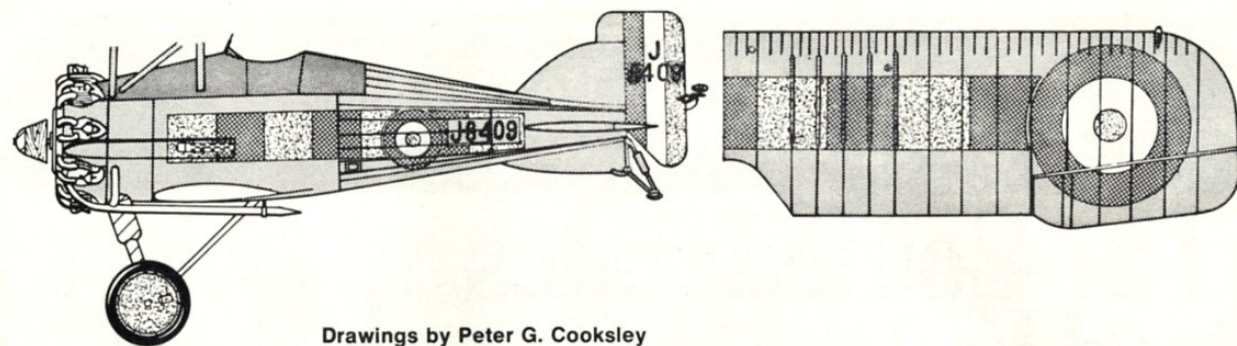
11" x 8½" 256pp (illustrated)

£6.50

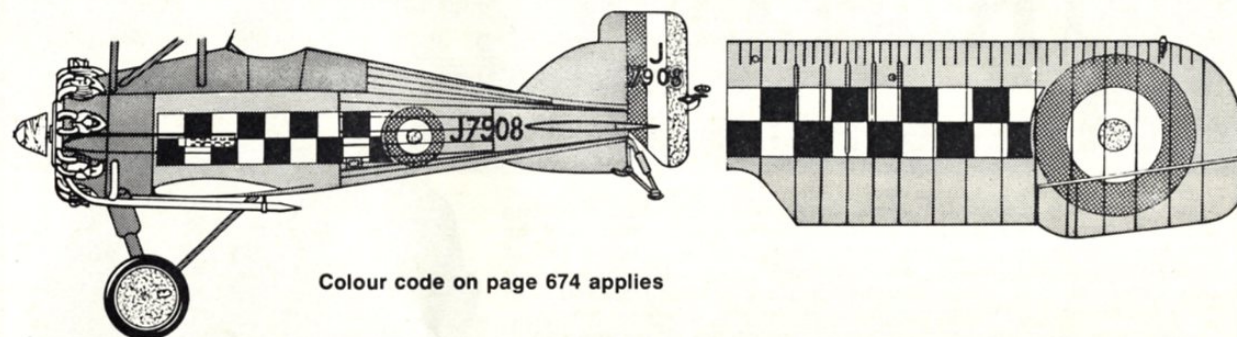


Books are obtainable from leading booksellers or from our Retail Department (address above). When ordering direct, please send remittance, adding 10p in the £ (up to 40p maximum) to cover postage and packing. Small paperbacks require the addition of 5p for postage and packing. All postage and packing VAT inclusive

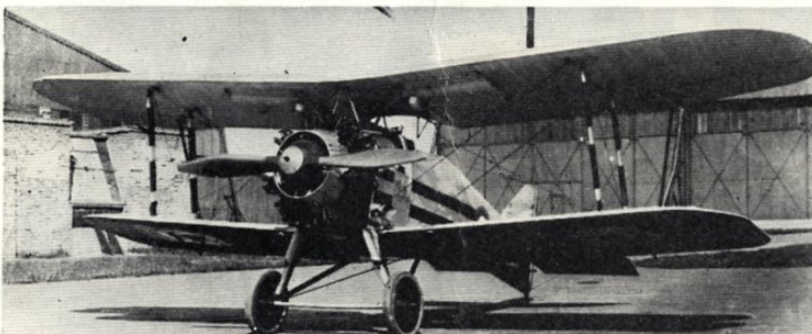




Drawings by Peter G. Cooksley



Colour code on page 674 applies



#### Continued from page 672

Next year the first production Grebe J7283 Mk II, appeared at the 1924 Pageant with New Types Park No 1 as illustrated. That same year the type entered service with No 25 Squadron.

At the end of the year, flight colours were introduced for wheel discs, red, yellow and blue for A, B and C Flights respectively as detailed last month. Squadron markings were coming into vogue and the markings used by the five squadrons that operated Grebes at squadron strength are illustrated. Additionally No 111 Squadron had one flight of Grebes as interim equipment.

Serials on Grebes were marked on both sides

**Top of page** Gamecock I of 23 Sqn (top): J7894-7899 and J7902-7903 were squadron initial equipment; and Gamecock I of 43 Sqn: J7904-7906 and J7919-7920 were squadron initial equipment. **Above left** a Grebe in service with B Flight, 25 Squadron, in overall aluminium doped fabric, having black squadron fuselage stripes, red wheel discs and black struts bound with white tape. **Left** Gamecock showing the prominent exhaust collector ring on the Jupiter VI engine of the production machines.



Standard Gamecock factory finish to T4S (Titanine Scheme 4 sprayed).

of the rudder and usually also on both sides of the rear fuselage in 8-inch characters. Serials were not marked under the wings before March 1927 and in case modellers wish to add this refinement, Grebes known to have been written off before this date and therefore would not have qualified for such markings are given in the full range of serials allotted to Grebes which was as follows:

**Grebe I** J6969 service prototype and G-EBHA civil demonstration aircraft.  
**Grebe II** J7283-7294; J7357-7402 of which J7361 collided head-on with a Bristol Fighter, March 15 1926, J7372 and J7392 collided in mock air combat over Capel (near Folkestone) February 17 1928 and J7385 and J7395 collided in mid-air over Elmdon (near Royston) September 25 1925; J7406-7417; J7519-7538 including two-seat conversions; J7568-7603 of which J7576 crashed near Cambridge, August 18 1926, J7582 crashed into a hillside at Rottingdean February 4 1927 and J7584 stalled during aerobatics at under 500 feet September 20 1926; J7784-7786 final production.

Three ex-RAF Grebes went to the Royal New Zealand Permanent Air Force as NZ501-503.

#### Gamecock

Basically the Gamecock was a Grebe with its Armstrong Siddeley engine replaced by a Bristol Jupiter engine and changes in fuselage section and fin and rudder shape. Placed in production the Gamecock entered service in 1926 and formed the equipment of five squadrons of which Nos 23 and 43 markings are illustrated. It also served in No 32 Squadron whose unit markings were basically the same as on their Grebes, and it provided temporary equipment for Nos 3 and 17 Squadrons formerly with Woodcocks whose markings will be displayed next month.

The same general marking orders applied to the Gamecocks whose range of numbers were as follows:

**Gamecock prototypes** J7497, J7756, J7757, and G-EBNT and G-EBOE civil demonstration aircraft.

**Gamecock I** J7891-7920, J8033-8047 of which the last became G-ADIN with lengthened fuselage, J8069-8095 and J8405-8422.

**Gamecock II** J8804 general purpose version with revised fin and rudder shape, plus two built for Finland and J7910 Mk I modified.

**Gamecock III** was unofficial designation for J8074 with lengthened fuselage and other modifications and was rebuilt for private use as G-ADIN.

Further Gamecocks were supplied to Finland where others were built and GA-46 of the Finnish Air Force was the last Gamecock to fly in September 1944. □

#### ADVERTISER'S ANNOUNCEMENT

## Soldier News

Report from **Chris McCarthy**

THE TREMENDOUS RESPONSE I have received from the first article of this series has been excellent. It is hoped that SOLDIER NEWS can continue not only to be a source of information on all new products but also a place for ideas to be exchanged and for problems to be sorted out. Although it is impossible to answer any letters personally, I will discuss problems and ideas in this column as space permits. Write to me at SOLDIER, 36 Kennington Road, London SE1.

Heroics, the new name in wargame figure manufacturers have appointed SOLDIER as their agents for the distribution of their 1:300 range of British and German tanks of the North African Campaign of the Second World War. These figures are the most perfectly detailed so far produced by any manufacturer. Have you ever been able to recognise a British Infantry helmet in 1:300 scale? Well, you can with these! They will retail at 12p to 16p per set of either two tanks or AFVs; a gun and crew; or a set of infantry. Over 40 different items are now in stock and SOLDIER can supply trade as well as retail. Send S.A.E. for latest Heroics 1:300 list.

Garrison wargame figures have now produced sets of gladiators, six different figures retailing at 45p per set, P&P 8p. Lasset, producers of fine quality 54 mm figures, are now issuing a set of ancient warriors, Early Russians, Saxons, Vikings, Crusaders, Normans, Medieval and Crecy crossbowmen. They are all magnificent figures and retail at £1.10 with 10p P&P.

Among the many new books in this month is *Head-dress Badges of the British Army*, by Arthur L. Kipling and Hugh L. King. This is undoubtedly the most important and comprehensive work on head-dress badges ever produced and covers badges worn on every known type of British Army head-dress from the mitre cap to the field service cap. This enormous book contains 468 pages and the excellently detailed text is complemented by hundreds of photographs of nearly 1,900 specimen head-dress badges. Although priced at £13.50 it is an indispensable source of reference for all concerned with military history. Available from SOLDIER, 36 Kennington Road, London SE1. Add 50p P&P.

Other books this month include *Wavell, the Viceroy's Journal*, edited by Penderel Moon, Oxford University Press, an excellent new work on this interesting man. 528 pages, 24 black and white illustrations £5.00 plus 30p P&P; *Marlborough as Military Commander* by D. Chandler with 367 pages and 17 maps for £5.00 plus 25p P&P; *The Book of the Sword* by Burton with many fine line drawings at £4.00 plus P&P of 20p; *Model Soldiers* by Carman has over 20 colour illustrations and sells for only £1.50 plus 20p P&P. Hicks latest *German Weapons, Uniforms & Insignia 1841-1918* is an excellent buy at £3.00, P&P 20p. *Life in Wartime Britain* by Chamberlain has 190 pages with over 100 black and white illustrations for only £2.00 plus 20p P&P. *The Book of Pistols & Revolvers* by Smith is profusely illustrated with 816 pages and *The Book of Rifles*, also by Smith, has over 700 pages with 2,000 illustrations.

Both sell at £4.40 each plus 20p P&P SOLDIER, 36 Kennington Road, London SE1 is obviously the place for all books on militaria.

Also available for the medieval and heraldry enthusiasts are the following booklets dealing with coats of arms: *The Siege of Caerlaverock* by C. W. Scott-Giles; *Heraldry in Westminster Abbey* also by Scott-Giles; and two booklets from the Heraldic Research Group, *Coats of Arms of Knights at Agincourt* and *Coats of Arms of the Conqueror's Companions*. These four are available at 40p each plus 5p P&P. Also available is Capt Edgar Letts *Tracing the Regiments* at 65p plus 5p P&P.

For the American Civil War enthusiasts the latest edition is *The Confederates and Federals at War* by Col H. C. B. Rogers. This book attempts to give the reader an idea of how the opposing armies really worked. The opening chapter gives a brief summary of the war, while the subsequent chapters deal in detail with the various arms and services, illustrated by examples from battles and campaigns. The book concludes with a detailed description of the battle of Chancellorsville to show all these activities in combination and to demonstrate the effect of leadership on the whole. The book, containing 185 pages and over 50 photographs, maps, and illustrations, sells at £3.20 plus 25p P&P.

Remember that SOLDIER also means books at 36 Kennington Road, London SE1.

For the wargamer just getting started SOLDIER has thousands of secondhand wargame figures in their basement showroom. I want to mention again that it is possible to buy painted metal 20 mm figures for as little as 5p each. And the very finest painted 20 mm figures are only 25p each per foot soldier and 50p each for mounted figures. Many of these finer figures are displayed in battle formation in a new 3 foot x 6 foot display case at the foot of the stairs. You can't miss it. Unfortunately, because of the continued fluctuation in both quality and quantity, it is not possible to sell second-hand figures by mail order!

The Britains toy soldiers are also downstairs and quite apart from the auctions which are held every two months, there are about three thousand metal soldiers for sale. Some idea of Britains' prices: Guardsmen running at the trail £1.25; set of seven German Infantry with officer £5.00; Yeomen Warden £1.00; Marines running at the trail £1.00; Marines in box packs marching 80p; Line Infantry marching 80p; RAMC group of 20 pieces £20.00; Whistock box of eight Pipers of the Scots Guards £12.00. There are hundreds more but no space for description, send a list of your requirements.

Also downstairs are the flat soldiers, both new and secondhand made by Tobinuss, Scharlowsky, Ochel, Neckel, Grunwald and many others. Included among these are some of the most beautifully painted flats by Ken Bastian I have ever seen.

Remember that SOLDIER are wholesalers and retailers for over 95 different manufacturers. Where else should you go but to SOLDIER, 36 Kennington Road, London SE1. Telephone 01-928 7479. □



# NEW kits and models

## Rareplanes: Airacuda

RECENTLY RELEASED FROM Rareplanes is their largest kit to date, the Bell XFM-1 Airacuda. This pre-war unconventional twin-engined fighter was looked on as being the answer to all long-range protection for bombers when it first flew. Having two large calibre cannons mounted in pods on the wing and pusher propellers it was given much publicity at the time. The fact that it got no further than the building of several prototypes did not deter its exponents from remembering the Airacuda with nostalgia and it is still a popular subject for modellers, particularly in the US.

Gordon Stevens' Rareplane model will therefore be most welcome on the other side of the Atlantic, even more so as it is an excellent model and one which builds into a very impressive replica. The most noteworthy point is the many more parts that have to be cut from the vacuum moulded sheets. Also, the fact that the thickness of the polystyrene has been increased from earlier productions will make the construction of this model easier.

Both of the gun/engine nacelles are entirely moulded in clear plastic but this does not detract from any of the first-rate detail that we now come to accept as part of a Rareplanes kit. Because of the size of the cockpit transparency the model has, as part of the construction, detailed cockpit walls allowing the man who specialises in an exact replica to work on the inside as well as the outside of the model.

Rareplanes kits have now reached a very advanced stage in perfection. We do not know whether or not it is possible to go any higher in either the presentation of the kit, its packaging

or the finish of the original moulds. The Airacuda, now the largest kit in the range, keeps up these standards and although the price of £1.25 is rather high we feel that this is well worth paying for what you get.

## Battledec: Sky codes

FOURTH RELEASE in the new series of water-slide transfers marketed by Clark-Carpenter (see *Airfix Magazine*, July 1973) under their Battledec label is a sheet of RAF Squadron Code letters printed in Sky type 'S' blue for 1:72 scale model aircraft. Containing 160 individual characters, the sheet will be an invaluable purchase for all Second World War aircraft modellers working in this standard scale. No price has yet been settled on these decals and all enquiries should be addressed to the distributors, Argyle Models, 247 Argyle Street, Glasgow. Readers in America will be interested to learn that Horizon Hobbies of New England, PO Box 398, Enfield, Conn 06082 are now handling the Battledec range.

## 1:1200 scale ships

MODEL FIGURES & HOBBIES, 8 College Square North, Belfast BT1 6AS, have launched a new range of 1:1200 scale warships called the 'Ensign' Series. Cast in metal, these ships complement the old Tri-ang waterline ship models or the new Almark 'Mini-Ship' series of plastic models, and will undoubtedly go well with the new Airfix ship kits to the same scale when these are released later this year.

At the moment the 'Ensign' range consists of a variety of British submarines and German U-boats, plus a British 'H' Class and a German

'Narvik' Class destroyer. Prices range from 10 to 25p (plus 3p postage per item up to £5) which is very cheap in comparison with the other ranges currently available. Mouldings are of fairly good quality in most cases but lend themselves to extra detailing. A complete list of these models is available from Model Figures & Hobbies to anyone who sends a stamped addressed envelope.

## Historex: new catalogue

THE MODEL SOLDIER fraternity has been buzzing for several weeks now with rumours of a new 'super' catalogue from Historex, and now we have managed to see proofs of this we are sure their anticipation will be richly rewarded.

Containing 72 pages, 12 of them in full colour plus a full colour cover, this is far more than a straightforward list of Historex kits — although these, of course, are fully documented, as is the firm's famous spare parts service. In a way the catalogue is a reference book as well, for it contains articles by a number of well-known modellers, including 'Tips about converting Historex figures' by Bill Hearne, 'Acrylics for soldier painting' by Eddie Jones, and 'Working with Historex' by Shep Paine. These very useful features provide an ideal guide for all newcomers to these superb kits as well as many points which 'old hands' will find illuminating.

But it is the colour section which makes this catalogue real value for money, even at 90p. This includes paintings of Mamelukes, French Marshalls, Scots Greys, French line infantry, Scouts of the Imperial Guard, four hussar regiments, Chasseurs and Engineers of the Imperial Guard. On top of these, there are a large number of superb colour photographs of Historex figures and conversions by a variety of modellers, including Lynn Sangster himself. Quite apart from the modelling inspiration these provide, they are also a valuable source of information on uniform colouring and detail.

The catalogue is available from Historex Agents, 3 Castle Street, Dover, at 90p including postage, and is heartily recommended to all with an interest in Historex figures or the Napoleonic period in general.

## Mamelukes

ALSO NEW FROM Historex, although we have not yet seen any samples, is a range of Mamelukes which will probably feature among the favourite Historex kits in future. The range includes a mounted officer, guidon-bearer, Toug (emblem) bearer, trumpeter and Mameluke, plus a kettle-drummer; a regimental band consisting of guide, tambourine player, cymbalist and jingling johnnie, also mounted, plus a mounted figure of Roustam, Napoleon's personal Mameluke. Roustam is also available as a foot figure in two different positions. The mounted figures cost £1.65 each, the foot figures 80p each. Postage is 8p on all kit orders under £5, and the kits are available from Historex Agents at the above address.

## Tools

ALTHOUGH NOT NEW, we have also received samples of some of the tools which Historex can supply to help in the assembly of their kits (or any other plastic models for that matter).

Continued on page 680

# MODELS

## PLASTIC KIT SPECIALISTS—ASSOCIATE MEMBER I.P.M.S.

### MODELDECAL DECALS 1/72



AIRFIX KIT FINISHED AS F-4B PHANTOM, VF-111, 1971 USING MARKINGS FROM SET No. 15

Modeldecals sets Nos. 1, 2, 3, 7 and 10, are again all available as listed opposite. The accompanying instruction sheets for Nos. 1, 2 and 3 now all include a selection of photographs as appropriate, on the reverse side. The decal sheet for No. 2, now contains instrument panels for each machine.

'MODELDECAL' style fully illustrated instruction sheet, giving decal locations and full colour scheme details, is included with all Modeldecals, and commencing with set No. 17, a selection of photographs is also included.

OVERSEAS TRADERS. These superb decals are already stocked by traders in many countries, immediate supplies with full terms. Details on request.

### HASEGAWA A/C

Lockheed T-33A	1/72	32p
Curtiss SO C-3 Seagull	1/72	32p
N.A. F-86F Sabre	1/72	32p
Heinkel HE-51A-1	1/72	32p
F-5A Freedom Fighter	1/72	32p
T38A (F-5B) Talon	1/72	32p
A6M2 Zero	1/72	35p
A6M3 Mod. 22 Zero	1/72	35p
A6M3 Mod. 32 Zero	1/72	35p
A6M5c Zero	1/72	35p
Heinkel HE-51B-2	1/72	50p
C. Seagull Floatplane	1/72	50p
Cessna A-37A	1/72	50p
Aichi E 13A "Jake"	1/72	50p
Beil UH-1D Iroquois	1/72	50p
MIG-17E/D 'Fresco'	1/72	50p
Fuji T-1A Trainer	1/72	60p
Type 94-1 "Alf"	1/72	75p
G.A6A Intruder	1/72	90p
F-4E Phantom	1/72	90p
F-106A Delta Dart	1/72	110p
F-102A Delta Dagger	1/72	110p
L. Neptune P2V-7	1/72	110p
G4M1 'Betty' and	1/72	110p
OHKA Mk. II Bomb	1/72	110p
GBN1 'Rita'	1/72	110p
Emily Flying Boat	1/72	110p
Boeing B-47E	1/72	110p
H6K5 Mavis Flying Boat	1/72	110p
Shinmeiwa PS-1 or SS-2	1/72	110p
SP-5B Marlin	1/72	110p
Curtiss BF2C-1	1/72	110p
Boeing P-12E	1/72	110p
Boeing F4B-4	1/72	110p
A6M2 Zero	1/72	110p
ME.BF109E	1/72	110p
ME.262	1/72	110p
G.F6F-3/5 Hellcat	1/72	110p
F-86F Sabre	1/72	110p

### POSTAL SERVICE

Postage and Packing, UK rates (Books and Decals see special rates). Up to 50p, 10p. Up to £1.50, 15p. Up to £3.00, 25p. Up to £5.00, 30p. Up to £7.50, 35p. Up to £10.00, 40p. Over £10.00 Post Free. S.A.E. with all enquiries please.

### SUPERMODEL LATEST . . .

Savoia Marchetti S.M.81 Pipistrello 1/72 Scale: Price: £1.90

### HELLER

Curtiss P-40E	1/72	28p
Me. Bf 109F	1/72	28p
Morane 225	1/72	28p
Morane 230	1/72	28p
Caudron C-714	1/72	28p
Les Mureaux 117	1/72	28p
Morane Saulnier 406	1/72	28p
Dewoitine D-520	1/72	28p
Bloch 152	1/72	28p
Armist 143	1/72	28p
Bloch 174	1/72	28p
Breguet 693	1/72	28p
Potex 63-11	1/72	28p
Potex 631	1/72	28p
Potex 540	1/72	28p
Lioré et Olivier 45	1/72	28p
Leo 451	1/72	28p
Ju-87B	1/72	28p
Mig-19 'Farmer'	1/72	28p
Mig-21C 'Fishbed'	1/72	28p

### FROG

G. Avenger Mk. II/TBF. I	1/72	30p
ME 262A	1/72	30p
F. Gannet AS4	1/72	30p
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## Continued from page 678

These include scalpels and tweezers plus a beautiful little mousetail file which is ideal for all really fine work and is an invaluable investment for 27p plus 5p postage.

## Armour accessories

FINALLY THIS MONTH from Historex Agents comes the latest in their excellent range of 1:35 scale armour accessories, which are designed to complement the Tamiya figure range. This latest set sets a new standard for what is possible in fine same-size engraving and the firm are to be warmly congratulated for their expertise.

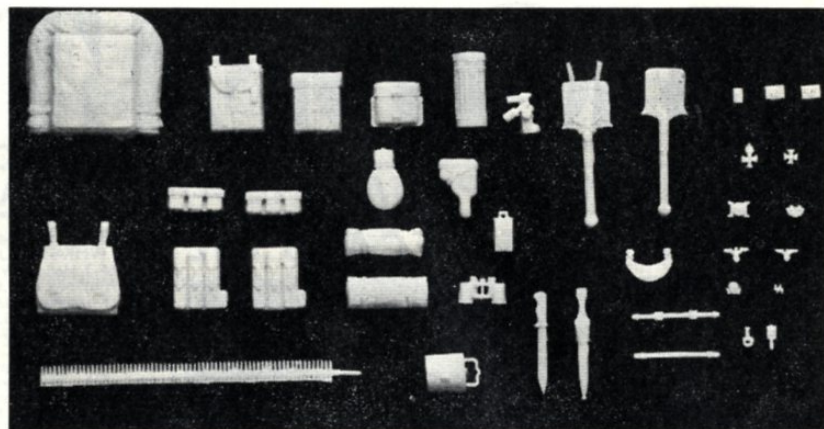
The set (No 4) includes entrenching tools, bayonets, ammunition pouches, capes, map case, water flask, pistol holster, torch, binoculars and many other items almost too numerous to mention, but our favourites are the little tiny insignia including an SS collar badge, Iron Crosses, belt buckles and an incredible Feldgendarmerie gorget with clearly moulded eagle and wording! For anyone wishing to turn out top-class model soldiers from Tamiya kits, this set is an absolute 'must' at only 41p including postage.

## Revell: RF-4E Phantom II

THIS LATEST RELEASE from Revell is somewhat confusing. Contrary to the box-top artwork and some sections of the instruction sheet, this is a model of the F-4E attack fighter, not the RF-4E reconnaissance version. The model is a rework of the F-4J tool, the only changes being the addition of a new nose cone assembly in place of the F-4J's radome, and the provision of parts for the 'chin' fairings for the GEM 61 A1 Vulcan cannon integral armament of this version. Other than these small changes, the kit is identical to the F-4J, and the comments of the review of the F-4J kit in March apply.

Confusion seems to have crept in with the presentation of this kit. The model and assembly instructions apply to the F-4E, whilst the box-top artwork, instruction heading illustration, decals and decal placement diagram are for the RF-4E, but the aircraft description of the instruction leaflet is a reprint of the F-4J description!

Still lacking with this model is a good variety of underwing stores, the F-4E is an attack aircraft and bomb racks and tanks would be a distinct advantage. Even the underwing hard points are not marked, so any detailing must be done with reference to a scale plan. Probably the most outstanding point about this model is the transfers. Beautifully produced by Britains, this transfer sheet must be easily the best ever supplied with any kit of the F-4 and will set a standard by which others will be judged. The only drawback is as mentioned



Some of the items contained in the new Armour Accessories pack.

above — that the marks supplied are for a Luftwaffe RF-4E, 97531 of Aufkl G52, one of the last RE-4E's delivered to the Luftwaffe.

Printed with a matt finish, and unmarred by faulty registration, the sheet contains all the small stencil blocks that liberally cover the operational Phantom II. AG 52's badges are very well done, and also included are the standard NATO slinging point symbols. The decal placement diagrams are a little imprecise and could cause a younger modeller some difficulty with the placement of the smaller symbols.

In spite of its size this kit does not do the F-4E justice, as many detail defects of the F-4J are still present in this model.

## Monogram: Mercedes Benz

THE LATEST ADDITION to the excellent range of 'Museum Piece' Car Kits from Monogram, is in fact, a re-release of the Classic 1939 Mercedes-Benz Supercharged 540-K.

This car was introduced in 1937 as the successor to the 500-K and sported a straight eight overhead valve engine that in its supercharged form, carried this three-ton limousine along at 106 mph and developed 180 bhp at 3,300 rpm. Only a limited number of these vehicles were produced and manufacture ceased in 1939 with the appearance of the 580-K at the Berlin Show. However, this car never went into production.

The kit is contained in the usual neat Monogram box, displaying several views of the completed model and the contents are protected by a cellophane cover, affording useful protection against 'model shop snoopers'. Flash is conspicuous by its absence and parts fit together extremely well.

Detail is outstanding but in the review kit,

many fragile parts were broken, especially on the chassis on which the bumper brackets and steering arms are very susceptible to damage. However, this sample was received by post and was probably subjected to rough treatment. Parts are moulded in grey, black, white and chrome, the latter being extremely bright and realistic, and not overdone as is common.

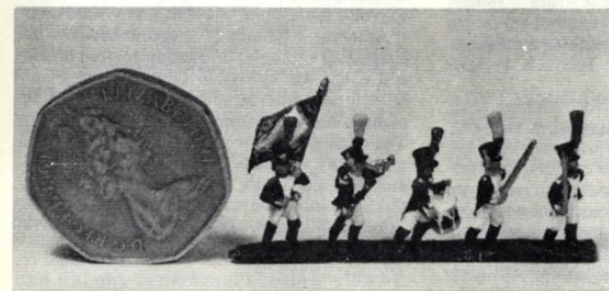
The kit model is best assembled in three distinct stages, viz engine and chassis, cockpit interior, and final assembly. This method lends itself to painting and will enable air brush or aerosol users to spray the body without extensive masking.

The kit is available from Jones of Chiswick at £2.75, plus 28p postage.

## Minifigs: new releases

MINIATURE FIGURINES LIMITED, originators of the popular 25 mm wargames figure scale and currently the world's largest manufacturer of these metal soldiers with a production of 24 million castings last year, are branching out into a wide variety of new fields.

First of all, apart from their 5 mm and 30 mm ranges reviewed earlier, they have now begun production of a range of 15 mm figures which combine the advantages of low cost and the facility for creating much larger wargames armies with those of a detailed figure capable of being painted to almost the same standard as a 25 mm one. Moulded in strips of five infantry or three cavalry at 10p per strip, these attractive little figures can rapidly be painted and assembled into large units at a fraction the cost of a normal wargames force, and many wargamers are predicting that they will in time better 25 mm in popularity. The only small problem with these figures is separating the individual figures from the strips after painting without ruining them, and we have found that



More new Minifig releases. **Top left** Middle Earth wizard painted as Saruman in his 'coat of many colours'; vicious-looking man-orc; a rather stocky elf; axe-wielding dwarf, and of course, a hobbit. Dwarves are sold in strips of two, the second figure armed with a spear, hobbits in strips of three armed with sword, short sword and spear. **Top right** Viking chieftain, warrior-class axeman, archer, standard bearer or warrior-class spearman, peasant-class spearman, and berserk. **Centre left** a strip of 15 mm Napoleonic with 50p piece to show the scale. **Centre right** British chieftain, swordsman and slinger; Ostrogothic archer (all from PB range); and one of the Indian Wars redskins. **Above left** 25 mm ECW figures: pikeman in Monmouth cap, artilleryman dousing sponge, two officers and halberdier. **Above right** more 15 mm ECW figures — dragoons, 'lobster' helmeted horse, and Royalist horse; musketeers, and pikemen: the standard bearer is fashioned from a pikeman.

the simple answer to this is to saw partially through the strip in between each figure before painting. When the group is finished the individual figures can then be snapped off with no trouble.

In their 25 mm range, Miniature Figurines have sent us the first samples in a new series of 'Middle Earth' figures. Wargamers who are also addicted to Professor J. R. R. Tolkien's epic fantasy novel *The Lord of the Rings* will be delighted with these figures, which currently include a wizard, man-orc, dwarf, elf and hobbit, illustrated here. Future releases will include Riders of Rohan, Dunedain, and Nazgul mounted on pterodactyl-like winged beasts, orcs and further examples both of the Free Peoples and Sauron's minions. Readers of *Wargamers Newsletter* will realise that there is considerable demand for fantasy figures of this type, and Miniature Figurines are to be

congratulated on such an imaginative venture. The figures will undoubtedly be especially popular in America, where Tolkien is a great cult figure, and in this context it is worth noting that the firm are soon to be opening a factory in the States.

Apart from these fantasy figures, Minifigs are also extending their standard Napoleonic, ECW, Ancient and Dark Ages ranges, some of which are illustrated here. Clean cast of jeweller's metal with minimal flash, these figures are superb value for money at 6½p for infantry, 7½p for riders and 10p for horses. Unlike some firms, they do not charge any extra for 'special' figures such as standard bearers, drummers and officers.

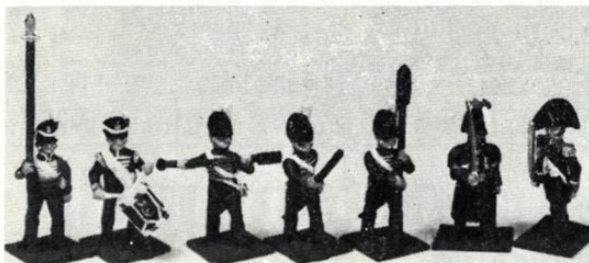
Proving their responsiveness to criticism from wargamers, Minifigs are also gradually re-moulding every figure armed with a spear, lance or pike to take advantage of improved

techniques in thinning down these weapons to nearer scale thickness. The Monmouth pikeman illustrated here is a good example of this new quality.

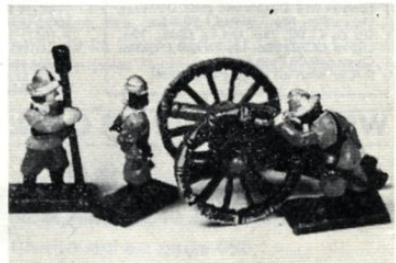
Finally, we must point out that the new Viking figures illustrated here were based on original drawings and specifications supplied by Ian Heath, *Airfix Magazine's* art editor.

Moving on, we learn that Minifigs are branching out into a number of other fields, including 54 mm scale figures, 20 mm scale metal military vehicles, and 25 mm scale vacuum-formed wargames buildings. A new factory is being built in Southampton to cope with the load, and we look forward to reviewing some of these in due course.

In the meanwhile, full information on the complete Minifig range is available from Miniature Figurines Ltd, 28/32 Northam Road, Southampton SO2 0PA.



Left new Minifig 25 mm Napoleonic; British sergeant and drummer painted as members of a battalion company of the 54th Line; two British horse artillerymen and a rocket trooper; and two French officers. Right new 15 mm ECW gun and crew, shown larger than life.





# books for modellers

## Modelling

**How To Go Plastic Modelling**, by Chris Ellis. Patrick Stephens Limited, 9 Ely Place, London EC1N 6SQ. Price £2.40.

THIS NEW EDITION of the famous book which has become accepted as the standard reference work on plastic modelling will be eagerly sought by all newcomers to the hobby, while even 'old hands' who already possess one of the earlier editions will find plenty of new material to interest them.

Topics covered include a brief history of plastic kit development; the present scope of kit ranges; choice of scale; tools for the job, both 'essential' and 'luxury'; basic kit assembly work and correction of fundamental kit errors; modelling materials, including glue, body putty, plastic card etc; the theory of converting; 'cross-kitting'; keeping a spares box; sprue and its uses; improving older kits; research and sources of research material; societies to join; painting and finishing, including air brushing; decals and how to get the best out of them; model display and scenic settings.

This introductory part is then followed by a 'conversion course' which describes how to model the Hawker Tornado, Czech Messerschmitts, a Spitfire XVI, Blackburn Roc, Hawker Tempest II, Hawker Fury, Churchill AVRE, M7 Priest, German Second World War cavalry figure, USS *Antietam* and HMS *Cumberland*.

Useful appendices list the main kit manufacturers and suppliers, reference sources, books and magazines.

The whole text has been thoroughly updated to take account of developments in the modelling field since the last edition was published in 1970, and includes two new conversions as well as numerous new photographs.

No newcomer to plastic modelling who wants to improve his techniques beyond the 'play' stage can afford to be without this book, and its price — considerably less than that of many kits now being sold — is very reasonable. More experienced modellers should note that Patrick Stephens also publish a sequel, *How To Go Advanced Plastic Modelling* at £2.

## Aviation

**The Seafire**, by David Brown. Ian Allan Ltd, Terminal House, Shepperton, Middx. Price £4.25.

THE STORY OF the development of British naval aircraft has not been a happy one, is not much related in any detail in print and warrants much more research. David Brown's Seafire book is a step in the right direction, and is by far the most detailed yet to appear on this type of subject.

The 204 pages of text include useful appendices listing operations in which Seafires

took part, technical notes and production data, known Seafire combats, and some individual aircraft allocations. These are rather fragmentary and doubtless the author would be happy to receive any additions from readers. There is ample scope for research in this sphere.

One might be forgiven for thinking that Seafires were fond of crashing when studying the photographs. The Navy was very keen on recording flying accidents on carriers, and line ups of carrier based aircraft also seem to abound. Shots of individual machines and good air-to-air are less common, and this is reflected in the illustrations in the book.

It is to be hoped that the author will now come up with more books about naval aircraft. Detailed accounts of the Sea Hurricane, the Barracuda and especially the 'Stringbag' would make excellent reading.

Aircam Aviation Series, No 39: **Messerschmitt Bf 109 B, C, D, E**, and No 40: **Messerschmitt Bf 109 F-G in Luftwaffe and Foreign Service**. Osprey Publishing Ltd, PO Box 25, 707 Oxford Road, Reading, Berks. Price £1.25 each.

BOTH THESE VOLUMES are to the usual Aircam formula with a brief history of the aircraft followed by pages of photographs and representative colour schemes. There have been many good books dealing with the Bf 109 so perhaps it is not surprising that a lot of the photographs are familiar. Others are so poor as to be hardly worth reproducing and there are few detail shots. Modellers will find the colour schemes useful if building up a comprehensive collection of 109 models.

**The Lockheed Constellation**, by M. J. Hardy. David & Charles Ltd, South Devon House, Newton Abbott, Devon. Price £3.95.

THIS BOOK is the first in a new series of aircraft family monographs from this publisher, perhaps better known for their excellent range of railway books. It records the full history of the Constellation, and all subsequent developments and variants of the original design, from first inception to its final form as the Model L-1649A Starliner. The evolution of each new version is described, together with brief accounts of the airlines, charter companies and supplemental carriers which operated them. There are separate chapters on the Super Constellation, the numerous 1049 and Early Warning versions, the Super G and the Starliner.

Useful appendices include specifications for all Constellation models and a list of 75 Constellation and Super Constellation variants. Well illustrated with photographs on practically all of its 128 pages, this book is a recommended purchase for aviation enthusiasts although it lacks the paint scheme and colouring notes required by modellers.

## Steam

**Traction engines and steam vehicles in pictures**, by Anthony Beaumont. David & Charles Ltd, South Devon House, Newton Abbott, Devon. Price £3.25.

THE HEYDAY OF the steam traction engine was from the 1890s to the early 1920s, but it was pre-eminent both agriculturally and commercially over a much longer span than this. There is a great fascination in these noisy monsters as the huge turnouts at traction engine displays every summer amply demonstrate, and this new book is a useful guide to anyone intending to visit such a display, or a wonderful souvenir for anyone who has just visited one.

Anthony Beaumont concentrates on interesting examples of traction engines which still exist, but covers in text and dozens of large-format photographs the products of 20 manufacturers spanning the years 1880 to 1947. The quality of all the photographs is excellent, providing a wealth of detail information for the modeller and steam enthusiast alike. Ideally, this book should be read in conjunction with the same publisher's *Traction engines worth modelling*, by W. J. Hughes.

## Military

**Famous Tank Battles from World War I to Vietnam**, by Col Robert J. Icks. Profile Publications Ltd, Coburg House, Sheet Street, Windsor, Berks. Price £4.25.

DON'T BE PUT off by the dust-jacket of this book (which depicts an M48 dressed up in German markings from the film *Patton*!), because the contents are really excellent and worthy of the attention of all armour enthusiasts and modern wargamers.

From its introduction and limited use in the early days of the First World War, the tank has brought about major changes and innovations in the nature of war. This new and lavishly illustrated book by a well-known military author assesses the value of the tank in 20th century warfare and details 32 battles in which AFVs have played a dominant and crucial rôle.

Many of these encounters will be as new to other readers as to us, since they range from French Morocco in 1925 to Mongolia in 1939. By ranging away from the well-trodden path of Cambrai to Alamein and Kursk, the author has managed to come up with many fascinating and little-known aspects of tank warfare which make extremely interesting reading. For example, how many people know of the tactic devised by the French to cope with the Riff's main anti-tank weapon in 1925 — an iron bar inserted between tracks and drive sprocket to lever off the tracks? Colonel Icks explains it all (in this particular case three-tank platoons were organised, one armed with a 37 mm gun, the other two with machine guns to protect it).

A major portion of the book is devoted to the Second World War, its battles and its commanders — men such as Guderian, Rommel and Patton who developed tank usage to a really sophisticated level. However, there are also useful chapters on post-war battles, in the Middle East, India and Pakistan and, of course, Vietnam. Numerous photographs well illustrate the development of the tank as a fighting vehicle, while each chapter is fully supported with maps and diagrams. This book

will undoubtedly become a standard work, and ranks alongside Guderian and von Mellenthin as an essential purchase for AFV enthusiasts.

**Rail Gun**, by John Batchelor and Ian Hogg. Published by John Batchelor Ltd, and distributed by Model and Allied Publications, 13-35 Bridge Street, Hemel Hempstead, Herts. Price £4.

TITLE AND PRICE suggest that this book might have a limited appeal but we believe that once modellers have seen the book many will be tempted to buy a copy, for this is a fascinating book on a fascinating subject. The authors are well known: Ian Hogg served in the Royal Artillery from the Second World War until retirement in 1972 and has written several books on artillery and personal weapons, while John Batchelor will be known to most as the illustrator of Purnell's histories of both World Wars, and co-author of *Tank*.

This is the first book on railway guns to our knowledge, and it contains a great deal of rare information, gathered from scattered sources. The story starts with a 13-inch mortar employed by the Federals against Richmond during the American Civil War then deals in turn with the development of railway guns by the French, British, Americans and Germans. Most of the guns were employed in the First World War but some French guns were used to support the Maginot Line, were captured by the Germans, and a few eventually ended up guarding the coast against the Allied invasion. The Germans also revived their 21 and 28 cm rail guns in the Second World War and developed a monster 80 cm gun, known as

Gustav or Dora, which was used to bombard Sebastopol in 1941. This gun, which weighed 1,329 tons complete, 'disappeared' towards the end of the war and has never been found!

There are 33 photographs and 66 drawings, plus 11 HO and OO scale drawings, so it will not be long before modellers turn their hand to modelling these fascinating subjects. The HO/00 plans are for the British 14 inch gun and 12 inch howitzer, the French 320 cm gun, and the German 24 cm Theodor Bruno and 28 cm Lange Bruno guns.

*Terry Wise some time ago suggested a series of Airfix conversions for rail guns and with the help of this book will be producing some models when his present series — Buildings for Wargames — finishes towards the end of the year. — Ed.*

**AFV Profile No 56. Missile Armed Armoured Vehicles**, by R. M. Ogorkiewicz. Profile Publications Ltd, Coburg House, Sheet Street, Windsor, Berks. Price 40p.

THIS LATEST FROM Profiles is rather an odd choice for it results in what is rather a hodge-podge of information on various vehicles and missiles. Although wide-ranging in its scope and coverage of its subject, it is not fully comprehensive as many of the Russian developments are not covered, and there is no tabulation of data that would be so useful to finish off a book of this kind. Having said that, it is only fair to say that we would suggest that everyone with an interest in armoured warfare should get hold of a copy of this Profile if only to grasp the author's excellent exposition on the rôle of the missile in the classic firepower and

Movement context. This is well put over and puts the 'missile means the end of the tank' argument into its proper perspective.

Apart from the above, the Profile includes a good background of anti-tank missile development and usage, with emphasis placed on the SS10 and 11, and the Shillelagh. At only 40p this book is good value.

**Pictorial History of Swords and Bayonets**, by R. J. Wilkinson-Latham. Ian Allan Ltd, Terminal House, Shepperton, Middx. Price £3.50.

MILITARIA COLLECTORS and miniature soldier modellers alike will welcome this new book from a well-known author, especially at this low price since other reference books on antique weapons are generally rather expensive.

The book is divided into three sections, covering respectively swords; daggers, knives and dirks; and bayonets. Part one describes the evolution of the sword up to 1750, then goes into more detail on the swords of various nationalities from 1750 to 1918. Parts two and three follow the same format, giving a general history up to 1750 then more detailed accounts of the late 18th, 19th and early-20th century weapons.

Line drawings illustrate the parts of a sword, various decorative engravings found on early swords, and a selection of makers' and other marks found on edged weapons. This is followed by 300 black and white photographs illustrating surviving weapons from a Scandinavian sword of the 9th or 10th century to a Japanese bayonet of 1911. Excellent value.

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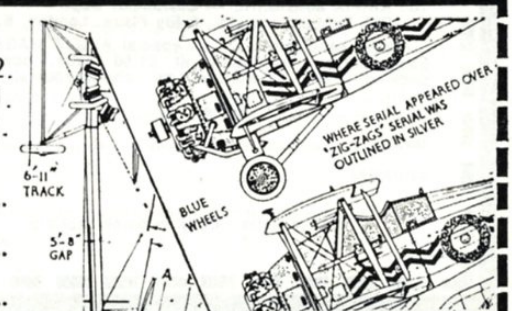
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